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ORIGINAL ARTICLES.

THE DIAGNOSIS AND TREATMENT OF EARLY TUBAL PREGNANCY.[1]

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THOUGH the subject of ectopic gestation has received a great deal of attention during the last few years, it is hardly necessary for me to apologize for bringing it before you. We need but to consider the gravity of the condition and its frequent fatal termination to find ample justification for reviewing the subject before a body of practising physicians, who, in the large majority of instances, are the first to see and advise in the emergencies which arise in this condition. To be able to meet these emergencies most advantageously it is of the first importance to recognize them. In order that we may prevent their occurrence, we must learn to diagnosticate an extra-uterine gestation before the alarming symptoms which sometimes accompany or follow it set in.

It is not my intention to go into an exhaustive study of the subject in its etiologic and pathologic aspects but rather to show how we can best meet these emergencies, as I have been taught by my own experience, gained through the clinical observation of thirty-four cases which it has been my good fortune to see within the past six years. The fact that I had occasion to see only four patients before any complicating or alarming symptoms had appeared would indicate that this condition in its inception causes only slight disturbances, scarcely enough to bring the patient to the physician's office. This I am sorry to say is quite true of a number of cases, and in such of course a serious accident may intervene before we have seen the patient. But the number of such cases is small compared to those in which the condition of affairs is not only not recognized but not even suspected. They are diagnosed as threatened or incomplete abortions, until sudden collapse makes the diagnosis clear. It is in these cases that we must learn to suspect the condition at once and either verify the suspicion by further observation or diagnose some other disturbance. It is intentionally that I use the word "suspicion" since it is in most cases impossible to diagnose an unruptured tubal pregnancy after a single examination. But once suspected we will be on the lookout and will carefully observe the patient.

As in no other pathologic condition I have learned in these cases to appreciate the value of a minute, carefully taken history and of a close study of the symptoms present. In all text-books, even in the most recent, we find "amenorrhea" mentioned as one of the cardinal symptoms of ectopic gestation. This is only partially correct and it is misleading, since it is not infrequent that there has been no cessation of menstruation; I would even go so far as to say that amenorrhea is the exception. But irregularities in menstruation or irregular uterine hemorrhages are in my experience not only the rule but are the very symptoms which lead these patients to seek advice. We hear that shortly after menstruation, say one or two weeks, a slight show was noticed; that it disappeared and after a few days reappeared; the time for the next period was marked either by a more profuse flow or by its entire absence. Or at the regular time of menstruation a scant discharge took place, stopped, and reappeared within a few days. Only rarely has it been my experience to find that "amenorrhea" has been present for one, two, or more months before this bloody discharge showed itself. These and some similar variations in the menstrual history are constant symptoms and to me always sufficient to call into consideration the possibility of tubal pregnancy. General and reflex symptoms of pregnancy may be present or not; they are more marked if the impregnation occurs in women who have been sterile for a number of years. These comprise a sense of fulness in the abdomen, swelling of the breasts, frequent micturition, and gastric disturbances. A certain feeling of heaviness in one or the other inguinal region which two of my patients felt but were unable to describe more closely, deserve mention, as it has been observed by others also.

These few subjective symptoms, together with the atypical or irregular bloody discharge should at once give rise to the suspicion of ectopic gestation. This suspicion, however, will at once be set at rest if on bimanual examination we find a normally pregnant or a pregnant retroverted uterus, both of which conditions will give rise to these symptoms if for some reason or other pregnancy has been disturbed and an abortive process has set in; and secondly (and this is far more important), if the uterine appendages are

[1] Read by invitation before the Monroe County, New York, Medical Society.

felt to be normal. Should we find, however, besides an enlarged and softened uterus a tumor of varying size to one side or behind it, the suspicion of ectopic gestation will rest on much firmer ground.

The typical characteristics of a pregnant tube differ widely from those evoked by any other possible condition. Laterally or behind the enlarged, slightly softened uterus, we feel a mass, varying in size from a large walnut to an orange, somewhat tender to the touch, movable, distinctly pulsating, imparting to the fingers a pseudo-fluctuating, boggy impression, and sometimes contracting during palpation. These symptoms together with the points already gained from a minute history are typical and decisive for an absolutely positive diagnosis. The expulsion from the uterus of a decidua *in toto* or in shreds at this stage is not a constant occurrence but is characteristic. In illustration I will give briefly the history of a case in which the diagnosis was made at this period and was verified by operation:

Mrs. M., thirty-eight years old, had had one child twelve years before, and four miscarriages since. On August 2, 1893, when I saw her first she said that her periods had been perfectly regular until July 15th, when after she had been two weeks overdue she had had a flow and had been treated for an abortion. Though she had expelled a membrane from the uterus she did not believe it to be an ovum for the sac was apparently an empty bag and judging from her former experience in this direction the membrane did not strike her as one containing a fetus. Because of a peculiar dragging sensation in her abdomen she consulted me. On close questioning I learned that though the regular menstruation had been suppressed she had had a slight show one week before the period was due. This, however, had only lasted a few hours and had not reappeared until three weeks later, when the flow started again and kept on varying in degree until the membrane above spoken of made its appearance. Such symptoms of pregnancy as nausea, a sense of fulness in the breast and slight pigmentation around the nipples were present. On bimanual examination a tumor of the size of an orange was felt to the right of the enlarged uterus. It had the characteristic features above described and at once the true state was manifest. The patient, a very intelligent woman, was not at all surprised when informed of the probable condition, consented to be operated on, but only wished a few days to arrange her business affairs, promising meanwhile to keep quiet and not exert herself physically. On account of severe cramp-like pains in the right iliac region she sent for me twenty-four hours later. Operation was now considered urgent and was accepted. The diagnosis proved to be correct; a still unruptured pregnant tube was removed which showed its peritoneal covering in some places already torn with slight bleeding from the underlying tissue.

Unfortunately, however, the conditions are only very rarely as clear and as distinct as in the case just narrated. Frequently we find patients of inferior intellect whose powers of observation are limited, who are unable to help us in elucidating a true and distinct history not only as to the present condition, but in regard to previous inflammatory processes as well. An examination is often made difficult by hyperesthesia, or by fat, or by contracted abdominal walls, which necessitates an anesthesic to enable us to explore the pelvis. Here too we may find a tumor, but may be unable to detect the classical features of a tubal pregnancy. We are then confronted with the task of making a differential diagnosis between various other possible conditions on the one hand and tubal pregnancy on the other. This is not only a difficult problem but sometimes one the solution of which is impossible. We have then to be satisfied with a mere probable diagnosis of ectopic gestation, as the outcome of our examination, painfully careful though it may have been.

We may exclude from the diagnosis normal pregnancy, still existing or interrupted, with coincident swelling of the uterine appendages, due either to cystic or inflammatory changes if, after repeated examinations, we find, for instance, that the mass has grown while the uterus appears either the same in size or even smaller. Pregnancy in a bicorned uterus may very easily be mistaken for an ectopic gestation, and can be excluded only by the most careful palpation of the pelvic contents under narcosis. This condition is, however, of too rare occurrence to play an important rôle in our diagnosis. Pregnancy in a retroverted uterus, with or without accompanying pathologic conditions of the tubes and ovaries, has in my experience always been easily distinguished from a tubal pregnancy. Only in a small number of cases will the uterine sound prove to be of any material use in our attempt to reach a conclusion. It helps us in doubtful cases to recognize positively the position of the uterus; it may prove the emptiness of the uterine cavity, but gives no hint as to a previous abortion. The microscopic examination of expelled shreds I consider of great importance when done by pathologists thoroughly familiar with the subject. It surely helps us in a given case to assert positively that a process of gestation has been established; sometimes under very favorable circumstances the microscopist may even be able to go farther in his assertion and state that the pregnancy has not been uterine.

The symptoms of tubal pregnancy will be much more distinct if the walls of the tube are unable to reach the degree of distention required by the growth of the ovum. The tube will either gradually tear or else it will make efforts to expel its contents through

its distal end into the peritoneal cavity. We are then told of pain extending over hours or sometimes days with but short intermissions. The character of these pains is not only severe but of such a nature that patients are less able to endure them than any other pains they are called upon to suffer. They begin usually in one inguinal region and not infrequently cause the patient to feel faint or even lose consciousness for a short time. On recovering nothing pointing to any serious disturbance is noticed until another attack occurs. These pains, caused by contraction of the tubal walls, are in my experience usually followed by the expulsion of pieces of decidua from the uterus. With the history of disturbed menstruation and the presence of a pelvic mass of appropriate size, these symptoms are sufficient to warrant a diagnosis of still unruptured tubal gestation.

Much easier is our task when we are called to see a patient at the time of or soon after rupture of the tube, or when a tubal abortion has occurred. Harmless and as little disturbing as the presence of an unruptured pregnant tube appears to be, just as alarming and distressing is the condition when rupture has taken place, or when the tube has expelled the ovum into the peritoneal cavity. We are told of a sudden attack of severe abdominal pain followed by a loss of consciousness. The patient herself shows all the signs of severe shock and acute anemia. The skin is pale and cold, the radial pulse if at all perceptible is small and rapid. The abdomen is slightly distended and extremely sensitive to the touch. The temperature is normal or even subnormal. By the vagina we get the impression of fulness in the pelvis without being able to feel a well defined tumor. Should the patient soon recover from this condition of collapse and the symptoms abate, it is often only a short interval before collapse again takes place. With the aid of a history of irregularities in menstruation we have now little difficulty in making a diagnosis of a ruptured tubal pregnancy though it is nearly impossible at this moment to distinguish a tubal abortion from rupture, since both accidents are principally characterized by the signs of severe and repeated hemorrhages. Although it may often be difficult to differentiate an ectopic gestation before its rupture from a pyosalpinx or an ovarian abscess, it is comparatively easy to do so after the rupture of either. In the latter instances the condition just described is based solely on shock, no active hemorrhage having taken place; in a few hours the signs of acute shock will have disappeared and are replaced by those of acute sepsis.

Luckily not all of these women die in consequence of tubal rupture or abortion. A number of them, I am glad to be able to say, quite a large number, recover from this most serious and apparently hopeless condition. The escaped blood coagulates and plugs the bleeding vessels by mere pressure. A peritoneal irritation caused by the sudden traumatism becomes a localized peritonitis and results in the shutting off of the coagulated blood from the free cavity and forms the so-called retro-uterine hematocele. As a rupture of the tube within the folds of the broad ligaments and consequent collection of blood extraperitoneally, is a rare occurrence, I refrain from going into the discussion of its clinical aspect and will content myself by saying that if it occurs, its symptoms are surely not so alarming and only seldom call for our interference. This is probably the reason that we so rarely have the opportunity to study this condition either on the operating- or the dissecting-table. In its recent state the retro-uterine hematocele is easily recognized, especially if the history gives any of the points already dwelt upon. The uterus is usually pushed forward, the mass fills the pouch of Douglas sometimes to such an extent that the posterior vaginal wall bulges very low down; while above the mass extends not infrequently beyond the brim of the pelvis. It appears soft, not fluctuating, immovable, and tender, As time passes this tumor of coagulated blood becomes tenser, harder, and very much smaller. The effused serum is absorbed and the clot begins to organize. The facility of recognizing the condition decreases with the length of time elapsed since its development. After months have passed the memory of the patient fails to reproduce the exact circumstances of the former illness, severe as it may have been. Irregularities in the menstrual flow, pains, and everything else which might lead us to the right path are forgotten, a hard mass in the pelvis is all we find, whose relation to the uterus and appendages we are unable to define minutely. While bearing in mind all the possible pathologic conditions we are now able to make our diagnosis only by way of exclusion, or may be able at most only to confine the number of possible conditions within small limits.

In most cases the expulsion of the ovum into the peritoneal cavity, be it through a ruptured tube or through the distal end of the tube, is not survived by the fetus. Occasionally, however, for some reason or other, rupture of the gestation-sac is not followed by the death of the fetus. In these cases with the lapse of time the diagnosis becomes less difficult. As such cases are not very frequent I shall give the history of the only one I have been able to observe:

Mrs. S., twenty-five years of age, had had one child four year before and three miscarriages, all at the

beginning of pregnancy. Menstruation regular, always more or less profuse. She had menstruated just three months before her admission to Mt. Sinai Hospital on August 11, 1894, but had noticed that the flow was decidedly less than usual. About ten days afterward a bloody discharge was seen only for a few hours or so. With the exception of slight general disturbances which the patient had experienced during each of her pregnancies she was perfectly well until three weeks before admission. Then on performing some household duties she was suddenly seized with a sharp, intense pain on her left side, which caused her to faint. A few hours afterward the pain had ceased and the patient felt well until another similar attack two days later. Within the next three weeks she had three more attacks, after each of which she had fainted, and was unable to move for some time afterward. Slight uterine flow had accompanied the first attack and had not ceased since. When admitted she presented the picture of extreme anemia; radial pulse hardly to be felt, rapid; the abdomen distended, very sensitive to the touch. Bimanual examination revealed an enlarged soft uterus behind the symphysis. To the left of it a mass of irregular shape, but apparently as large as a fetal head, slightly movable, giving a boggy impression in some places, decided fluctuation in others. Fluid in the peritoneal cavity was easily detected. In spite of the miserable general condition of the patient I decided to operate at once. Under narcosis fetal parts could be felt through the abdominal wall. On opening the abdominal cavity about two quarts of dark fluid blood escaped; the left tube, the seat of the placenta, was wide open, showing still bleeding vessels in its torn walls. The whole mass was covered by adherent gut and omentum; the fetus was surrounded by intact membranes and made slight movements even after its removal.

On reviewing all the symptoms and signs of tubal pregnancy in its various stages it will readily be seen that the difficulty of recognizing the condition changes with each case; that in some of the unruptured cases we are able to make a positive diagnosis with the help of an exact history, and the physical signs elicted by a thorough examination, and that in other cases we are unable to make a positive diagnosis because of the absence of typical symptoms and must be content to describe the condition rather indefinitely as one of "supposed" or "probable" ectopic gestation. When we consider the peril impending over this class of patients, when we think of the grave danger which threatens them in case of the development of some complication, the mere fact that we suspect (on some substantial basis of course), the existence of a tubal pregnancy is sufficient for practical purposes, for it puts us in a position to serve best the interest of our patients, than which there is of course no higher duty in our profession. I do not deny that we may frequently find that we have erred, but by these errors we will never harm our patient. But if we only once make a correct diagnosis we have the supreme satisfaction of knowing that we have saved a possibly doomed life, certainly one menaced by grave peril. I can give no better illustration of the dangerous position of a patient afflicted with tubal pregnancy, left to its natural course, than to refer to the statistics of cases collected by Schauta up to the year 1890, according to which out of 161 patients in the first half of pregnancy not interfered with, 132 died and only 29 recovered.

Little wonder indeed that there is a daily increase in the number of followers of that author who advises us to consider an ectopic gestation in the same light as a malignant growth and to remove it at the earliest possible moment. I personally have always adhered to this rule and have never tried to substitute for a surgical procedure any of the so-called simpler and less dangerous therapeutic measures, such as the galvanic current or the injection of morphin or other chemicals into the gestation-sac. While I do not for a moment doubt the possibility of these agents doing the required work of killing the fetus, I have good reason to believe that with the death of the fetus all danger from hemorrhage has not passed. I also believe that under these conditions the chances of the occurrence of secondary infection are greater. Once the diagnosis of an unruptured tubal pregnancy is established or even reasonably suspected, it is, I believe, in the best interest of the patient that the gestation-sac be removed as soon as circumstances will permit. Should there be a mistake in our diagnosis it has no further significance than that the patient was operated on perhaps somewhat sooner than she might have been with a correct diagnosis; for it is only existing pathologic conditions, which require removal sooner or later, that can be responsible for our error.

For the removal of a pregnant tube I have heretofore employed the abdominal incision, but in the light of wider experience with vaginal work, I think there are cases in which the tumor lies low in the pelvis, which can more easily be removed by an incision through the posterior fornix, in the same manner as we operate for the removal of small, freely movable ovarian cysts. The vaginal route, if practicable, is not only less dangerous for operation, but it also obviates stitch-hole abscesses so often encountered when the time for proper preparation, particularly of the skin, has not been allowed.

Our position is by no means so well defined and clear when we have to deal with a tubal abortion or a ruptured tube at the time of or soon after its occurrence. Still, considering the fact that in the early months of pregnancy this event is seldom, if ever,

followed by a single fatal hemorrhage, but that repeated attacks of shock and loss of blood are the rule, it seems only logical in these cases to resort at once to surgical procedures, to control further hemorrhage by opening the abdominal cavity and ligating the affected organ. It is but a natural feeling that in some desperate cases we should shrink from hastening the end by our interference; but as surgeons we must be free from such sentimentality. There are too many cases reported, where operations performed on moribund women have restored life, to allow us to watch the approaching end without having tried to avert it. Even should some patients succumb on the operating-table, we at least have the satisfaction of not having contributed to that end by a sin of omission.

Vigorous and continuous stimulation by all the means at our command is of course self-understood. Infusion of normal salt solution into the circulation has been so beneficial in its results that it ought always to be among the first therapeutic measures resorted to in these cases of extreme loss of blood. The apparatus for its application ought to be at hand; in desperate instances a vein may even be dissected out before operation, so as to enable us to infuse without loss of time, should that measure be indicated. I have always treated retro-uterine hematocele, after all the signs of active bleeding have disappeared, with wide incisions through the cul-de-sac and drainage, and have every reason to be satisfied with the result of this simple procedure.

Having reviewed thus somewhat in detail the diagnosis and treatment of this most serious and grave phenomenon, allow me to call your attention once more to the extreme importance of a correct diagnosis in this class of cases, and to urge that when an absolute diagnosis is impossible or difficult, that there is no condition in which the use of the knife is more justifiable. So many lives have been uselessly sacrificed in the past by the lack of recognition of this ailment, that we should try to make it a point of professional pride that, when the patient is seen before every hope has vanished she shall no longer be left to die because of our timidity.

There is one point left for me to insist upon, and I do so only because I have frequently seen the evil results accruing from it. I refer to the indiscriminate use of the curette upon women who are suffering from metrorrhagia, the curettement being accomplished often without a vaginal examination, or at least without a thorough one. I have dwelt sufficiently upon the symptomatology of tubal gestation to make it clear, I hope, that a metrorrhagia of some character is a constant accompaniment of the condition. It is always well, therefore, to bear this possibility in mind when called to see a woman from whose symptoms a probable diagnosis of "abortion" would be made. A careful, painstaking examination, even in the absence of a clear history, will frequently enable us to avoid the error of mistaking a tubal for an ended or partially ended uterine pregnancy. It should no longer happen that a woman suffering from an extra-uterine pregnancy should have her uterus curetted, packed with gauze, and be compelled to take hydrastis or ergot in heroic doses; for sooner or later, the true condition of affairs is bound to manifest itself, and then, when it is perhaps too late, the physician will find himself face to face with the gravest of emergencies. I said "It should no longer happen," and I am confident that as further study is given to the consideration of irregular uterine hemorrages by the general practitioner, the routine treatment of uterine and tubal diseases, and particularly of the pathologic conditions under consideration, will be relegated to the oblivion deserved, and that each case will receive that therapeutic application which our increasing skill in diagnosis and technic demands. Let me urge upon those of you who are in general practice, then, you who are the first to see and to examine these patients, to use your skill to the utmost, to abolish the routine treatment of hemorrhages from the uterine cavity and to restrict the use of drugs which cause uterine contractions to their proper spheres. Then I am certain that reports of cases of ectopic gestation will grow more plentiful in the same proportion as "deaths from internal hemorrhage" become more rare.

A FATAL CASE OF AFEBRILE ACUTE ENDOCARDITIS.

By CHARLES O'DONOVAN, M.D.,
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ON October 20, 1895, I was asked to see B. D., white, nineteen years of age, an unmarried man, engaged in teaching in a large school for boys. I found him to be rather thin and pale, but fairly well nourished considering his indoor work and the fact that he took very little exercise. His family history was good, except that his mother suffered frequently from severe attacks of rheumatism. He had himself always been healthy, though never robust. He was in bed and complained of severe pains in the abdomen, especially on the left side, just over the descending colon. His heart and lungs were sound at that time. His pulse was 84, and temperature 98.4° F. I examined his abdomen carefully, but failed to detect anything wrong. I ordered castor oil, to be followed in the morning by a moderate dose of Epsom salts. The next day he was much better, his bowels had moved freely, and his pain was gone. He complained, however, of feeling quite weak. I advised him to get up and to re-

turn the day after to his class, meanwhile taking care that his bowels should be regular, and ordered a light but nutritious and easily digested diet of eggs, milk, toast, broth, and light meats. I saw him next on October 28th, one week afterward, when he came into my office, complaining no longer of pain in the bowels, nor of any pain, but only of an intense weakness and a sense of constriction over the region of the heart. The change in his complexion was very marked; he had grown pale and ashy. His pulse was 96, but jerky. Auscultation revealed a murmur indicating aortic regurgitation, not as well defined as in an old case, but seeming to be caused by a very trifling insufficiency of valve action. All the other valves acted properly. He was ordered to bed as soon as he got home, and was given 20 grains of bromid of soda every four hours.

October 29th, 11 A.M. Pulse, 90; temperature, 98° F. The sense of constriction is gone; his appetite is good, and his bowels regular; he slept well; he has had no fever nor chill, yet the aortic regurgitant murmur is much more distinct, and a slight murmur begins to be apparent synchronous with the systole. Rest alone is ordered. October 30th, 11 A.M. Pulse, 90; temperature, 98⅕° F. His pulse is quite weak and compressible, and his temperature is reported to have been 97° F. at nine o'clock last night. The patient has been very comfortable; eats and sleeps well, and cannot realize that he is ill at all. Inside the heart, however, decided changes are taking place. The systolic murmur has become quite loud and rough, and the aortic murmur changes in character daily; the action of the heart, as a whole, is decidedly weaker.

October 31st, 11 A.M. Pulse, 90; temperature, 98° F. Feels very well. Slight endocardial changes since yesterday, but today could be made out for the first time a friction sound in the pericardium near the apex of the heart. Two coats of tincture of iodin were painted over the heart. Urinary analysis to-day showed neither albumin nor sugar. November 1st, 11 A.M. Pulse, 84; temperature, 98⅖° F; 9 P.M., 99⅖° F. About as yesterday; feels very well; pericarditis a trifle more pronounced; endocarditis but little changed; pulse weak still, showing some myocarditis; no chills; eats and sleeps well; no sweating. The iodin was continued. November 2nd, 11 A.M. Pulse, 84; temperature, 99° F.; 9 P.M., temperature, 99⅕° F. The aortic murmur seems less loud and much overshadowed by the systolic murmur, which is becoming louder and rougher daily. Pericardial friction sound is diminishing in intensity. Feels very well until he tries to get out of bed for anything, when his weakness becomes very apparent. Ordered to-day 40 drops of syrup of the iodid of iron three times a day, together with strict rest in bed. November 11th. The aortic diastolic sound is an undoubted valvular lesion. The systolic murmur seems to pervade both ventricles, and not to be limited to the location of the valves alone; there is also a presystolic *bruit*, all of which seems to indicate a general roughness of the ventricular endocardium. The sound of valve closure is sharp and fairly well defined, so that at the present there seems to be little or no mitral regurgitation. The systolic sound is, however, quite loud and unmistakable. There is no pericardial friction sound. His general condition is excellent; he is still in bed. The pulse is 84, stronger in tone, and fuller in volume. Urine, acid; specific gravity, 1027; no albumin; no sugar. The iodin was discontinued at the disappearance of the pericarditis.

The first thing that strikes one in studying this case is the remarkably slight elevation of temperature that was observed. The patient was a very intelligent young man, and had been carefully watched by a friend who lived in the same house with him, and who had access to him at all hours. They were both instructed to be on the lookout for any chill or apparent rise of temperature, and to use the thermometer at once, leaving it for my inspection at the next visit. I have every reason to believe in their ability to carry out my instructions, yet the highest temperature that I found was 99⅜° F., and, on the contrary, it several times fell below the normal, going to 97⅜° F. at one time. This makes one suspect that the murmurs might be of hemic origin rather than due to an endocarditis. I was myself inclined at first to consider them so, but no one could listen to the harsh, blowing, and churning sounds produced just beneath the ear without feeling sure that they arose from a roughened endocardium, and not from any altered condition of the blood. The changes, too, from day to day, increasing in intensity with the development of the disease, and now slowly subsiding, but with two distinct murmurs, readily located in the ventricles and at the aortic valve, make the diagnosis even more certain. Additional testimony is added by the intercurrent pericarditis.

In the most severe form of endocarditis the heart has been proven to be invaded by streptococci, staphylococci, and pneumococci, but other organisms have been found also. It may be that lighter cases may arise from invasion by less malignant organisms, many of which escape detection altogether, or are ascribed to intercurrent rheumatism or other diseases. This patient presented no sign of rheumatism, nor of any of the other diseases in the course of which endocarditis is usually anticipated. Certainly in this case the temperature presented no satisfactory ratio in comparison with the existing heart trouble. While the man was up and at his work he was very weak, and grew daily weaker at a rapid rate. After he was put to bed and kept under careful observation the intracardial changes from day to day were very marked, and each indicated the rapid proliferation of new tissue

and considerable roughening of the surface of the endocardium. Yet, with it all, no fever appeared; and, moreover, as soon as the extra strain, induced by the erect posture or by exercise, was removed from his heart, he experienced at once almost entire relief. The sense of extreme weakness which led him to seek advice, and the dyspnea that was not oppressive but was becoming so, and the very disagreeable sense of constriction about the thorax, all were relieved within twenty-four hours after he went to bed. And from this we may see clearly the most important indication in the matter of treatment. He was given a little bromid because he was quite nervous about his condition, but he took it only for about twenty four hours. After that he had no medicine; nothing but rest. When the pericarditis made its appearance enough tincture of iodin was painted twice a day over the entire region of the heart to burn the skin a little, but as soon as the pericarditis yielded this treatment was stopped. The case progressed so satisfactorily that no further treatment was indicated so far as the heart alone was concerned, but because of the consequent anemia it was thought advisable to give iron in some form, and for that reason the syrup of the iodid was given in 40-drop doses. Already I think I can perceive that the heart is beginning to accommodate itself to the new condition of affairs. I think that he will recover with a damaged aortic valve, but I hope that his mitral and tricuspid valves will entirely escape. At present there seems to be very little disturbance with their function.

The first part of this paper was written while his case was under treatment for the purpose of calling attention to the fact that serious endocarditis can exist with but slight elevation of temperature, and this, I thought at the time, was the only interesting feature about the case. The man at that time was tractable and obedient, and gave every promise of a satisfactory result. Under advice he continued in bed, and improved slowly but surely, so that by December 25th he was allowed to be up and about the room for a short while each day. He was still excessively weak and anemic, tiring very quickly when out of bed, but feeling perfectly well as soon as he lay down again. His appetite continued to be very good, but he assimilated badly and gained strength very slowly. His temperature was 98⅘° F. in the morning and evening. He still took the syrup of the iodid of iron in 10-drop doses after each meal. The valves of both the aorta and pulmonary artery showed disorder, giving rise to distinct regurgitant murmurs at each valve. The other valves were all right, and the peculiar vibratory churning sounds in the heart had by this time entirely ceased. He was allowed to walk about the house, being cautioned not to overtax his strength. He behaved very well until January 3, 1896, when, for his first venture out of the house, he went into the country some thirty miles by rail, to the funeral of a friend. The weather, at that time, was intensely cold. The next day I was told that he had returned to his work as school-teacher, saying that he felt perfectly well, that he had stood the fatigue of the day before without harm, and that he felt that he might as well be free from any restraint. I predicted then his sure relapse, and warned his friends of the suicidal folly of his action. I must acknowledge that at the time I had little credit for my prediction. I did not see the patient again until March 2, 1896, two months after his emancipation. Then he came to my office, complaining of feeling very weak and tired after his classes. He looked very thin and white. While sitting in a chair his pulse was 126, and it quickened very much when he stood up or walked. He was not aware of any chills or fever. His pulse impact was very fair, but the arterial tension was very low and the artery easily compressible. He had some twinges of rheumatism in his right leg. His appetite was gone. He had a constant short, hacking cough, with little expectoration, which became more frequent and annoying when he lay down, especially at night. Examination of his lungs revealed nothing abnormal, but in his heart the change was marked. The whole organ seemed filled with a seething, churning, fluid, in which the valvular sounds could not be made out. It was as if all valvular action was lost. I gave the gravest prognosis, and advised him to give up everything and go to bed at once for a prolonged course of rest and treatment. He preferred to go to a hospital, and accordingly went that day to St. Joseph's Hospital, where he continued to grow worse until he died, about a week later.

One point arises that is of interest. How long should an actively diseased heart be spared? Can any rule be laid down for the length of time that such a person should be kept in bed? As much as anything else, this case is interesting for the complete answer that it gives to these questions, showing the utter futility of making any certain rules for such matters. In no case can one foretell the length of time to be passed in bed; each case must be studied on its own merits. Patients with the lightest cases do not invariably recover, the heart muscle being frequently weakened out of all proportion to the gravity of the manifest symptoms, as in the case here recorded. The temperature-chart does not give the best index to the gravity of the case. The study of the pulse in its force, its regularity, and its rapidity is a wiser course. Watch the effect on

the pulse of effort, the difference between standing, walking, or lying down. Until the heart is able to bear up against the varying strain of these different conditions the affair may still be considered serious. If in doubt it is better to be over cautious.

WAR ARTICLES.

NEWS OF THE WEEK.

THE transport "Olivette," with 262 wounded and convalescent soldiers from the trenches before Santiago on board, arrived in New York harbor on July 16th. One hundred of the wounded were at once transferred to the Marine Hospital at Stapleton, Staten Island, 50 to St. Peter's Hospital, Brooklyn, and 54 to the Long Island College Hospital, Brooklyn, the 58 convalescents being taken to Governor's Island. While all the men seemed in excellent spirits and rapidly gaining in health and strength, the appearance of all as far as clothing was concerned was most deplorable. Most of them were literally in rags, and not a few were without covering for their feet. Among the whole 262 there was not one complete uniform, owing to the fact that as fast as the wounded were taken from the firing lines to the field hospitals their clothing was cut off so as to get at their wounds, and when they were in condition to be moved they were hastily clad in whatever scraps of raiment came first to hand. This, in most cases, was clothing taken from the dead on the field or from those who died of wounds in the hospitals. Unfortunately, no provision was made for clothing the men when they were placed on the transport. It is expected that an abundant supply of clothing will be furnished to them at once, the Woman's War Relief Association and other similar organizations having volunteered to supply all that is necessary. Very few of the men had any complaints to make of their treatment, and all apparently regarded the hardships they had undergone as a matter of course. The uppermost thought in the minds of many, not too badly wounded for future service, was the question of when they would be well enough to get to the front again. It is probable that the next boat load of wounded soldiers brought from the front will be taken to Bellevue Hospital, where 450 vacant cots have been placed in the Sturgis Pavilion for the use of the United States Government.

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Alleged lack of sufficient food furnished by the Government to the Volunteer troops awaiting transportation to the front has resulted in mutiny during the past week among the members of the Third Wisconsin Regiment at Charleston, S. C., and the recruits for the Seventy-first New York at Camp Black. Three men of the Seventy-first fainted when on guard duty as a result of lack of nourishment. Since going into camp but two meals a day have been furnished, and these have consisted of coffee and bread only, the supply of the latter in a number of instances proving entirely inadequate to the demand. This condition of affairs undoubtedly is the fault of the Commissary Department at Washington, and it is to be sincerely regretted that the steps necessary to obtain proper food for those who are to risk health and life for their country are so hedged about by red tape as to render the hope of immediate relief uncertain.

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The attitude assumed by the Cuban soldiers at Siboney and El Caney in absolutely refusing to perform their share of the labor necessary for digging intrenchments, making roads, transporting artillery and supplies, etc., such work being to their minds unsuited to free men, may afford an indication of the condition which will face our Government when the management of Cuba falls to its hands. It will be remembered that the Southern negroes, when newly freed from slavery, had very much the same idea of freedom. It meant to them freedom from work, freedom to pass their days in one long season of "*dolce far niente*," and especially freedom to draw upon the United States Commissary Department for food, clothing, and every necessary.

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It took a generation or more to educate the Southern negro into the meaning of the word freedom and it will take as long to teach the Cubans that without labor their incomes will be slim and their bill of fare much abbreviated. The situation and outlook are not depressing, however. Capital is already waiting in abundance for investment in the fertile tobacco and fruit lands of Cuba; men from "the States" will be sent by thousands to perform the necessary labor, and example will soon lead the natives to follow the course of the Northern wage-earners.

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Was there method in the continued requests for delays and truces requested by General Toral ostensibly to allow him to consult his home government regarding the surrender of Santiago? Spain's strongest ally is disease, and she knows it well. Each day of delay brought yellow fever nearer as a reinforcement. Every ragged, unclean, starving outcast from the city who came to beg rations of our men helped to spread the seed of contagion. It would be illegitimate warfare to poison the water-supply of

Santiago; what then is the ethical status of the spreading of a malignant contagion throughout an army of men in peculiarly fit condition for its most effective work?

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More alarming than any story of battle on land or sea is the report of cases of yellow fever among our soldiers at Santiago. Conditions are ripe for its deadly harvest. The men have been working almost to exhaustion in intrenchments of newly turned-up earth under a scorching sun, alternating with tropical downpours which drenched them to the skin. True, careful rules have been promulgated for their direction in matters of hygiene and diet, but as we have before suggested, it is one thing to formulate rules for personal habits and quite another matter to enforce them. Fortunately, the facilities for caring for the fever patients, while perhaps not ample, are still wonderfully complete considering the time available for preparation, and in Drs. Sternberg and Guiteras there is embodied the practical knowledge of the world in the handling of this dreaded pest, not only as to curative treatment, but covering measures to prevent its spread.

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Dr. Alvah H. Doty's suggestion that yellow fever patients be brought by transports directly to New York City or other Northern hospitals sounds like practical common sense. As he points out, New York is north of the fever belt, its hospitals are efficient and experienced in handling great numbers of sufferers from contagious diseases, and its quarantine regulations are ample to guard against any spreading of disease. Conversely it would certainly be a grave mistake to take yellow-fever patients or suspects to any port or hospital in the Southern States, where climatic conditions render necessary only the sowing of the seed to start an epidemic of unknowable extent and severity.

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Now that Santiago has fallen the Government evinces great wisdom in withdrawing our soldiers, with the exception of a few regiments of immune and acclimated troops to "hold our winnings," until fall, if necessary, before continuing active campaigning against Havana and the remainder of Cuba, and the men will heartily welcome a removal to the comparatively cool climate of the States. As we go to press, the negotiations for peace are becoming the subject of newspaper talk to an extent which would indicate that the end is near and that the remaining conflicts will be waged by diplomats instead of by army and navy, a consummation devoutly to be wished.

WINDS AND WEATHER IN MANILA.

By JOSEPH EARLE STEVENS,
OF BOSTON.

Now that our soldier boys are going to Manila and our merchants beginning to feel that Admiral Dewey has won for us a new El Dorado, a natural curiosity is aroused as to what are some of the ordinary conditions of existence prevailing in the far off Philippines. What is the weather like out there? How do the people dress? What is there to eat? Is it healthy? and a score of similar questions are daily asked of me as a result of the fact that I kept house in Manila for the best part of two years and took numerous excursions into many parts of the Archipelago.

More or less statistical and descriptive matter has been written on the Philippines since the guns of our fleet silenced the batteries at Cavité and sunk the Spanish ships that in my day used to swing peacefully at anchor off the breakwater, but for the reason that few correspondents have lived long in the capital some of the simple things of everyday life have escaped their attention.

As ought now to be known the climate in Manila is hot, though not unhealthy, and persons of ordinary constitution who are not especially subject to fevers or stomach troubles, can live there with equanimity. I take Manila as a standpoint, for just as France is Paris, so are the Philippines Manila, and everything feels the influence exerted by the capital. From noon until three o'clock each day the mercury visits the cross-bars on the thermometer lying between 90° and 95° F., except at such times as the heavy clouds of the rainy season shut off the sun's attentions and keep it 5° or 10° below. Fortunately, the nights are rarely uncomfortable, and 85° F. is very high for the temperature of one's bedroom. In the winter months, that run, as with us, from November to March, I have often shivered on the way to an early morning tub, as the Englishmen call it, with the mercury at 70° F., and in the hours before sunrise temperatures of 60° have even been recorded. The late afternoons of the winter months are as cool and delightful as one could wish, and it is only the hot, dry days of March, April, and May —when the fresh breezes of the southwest monsoon have not been fairly incubated—that the continued heat becomes annoying. The spell is broken, however, by the heavy thunderstorms which roll along in the afternoons of June and July, and with the coming of the strong southwest wind the rainy season begins. Not that it rains continuously, but that every now and then there will be seven or eight stormy days, to be followed, perhaps, by as many dull but fair ones. Those are the times when one's

boots grow moldy and one's tweed suits have to be hung out on the clothes-line at the first suspicion of sunshine.

As a climax to the wet season come the typhoons, which are more popular in the months of August and September than any other, and these fierce circular storms seem to blow or wash every atom of disease and dirt out of Manila. These storms, which are a terror to mariners on the China coast as well as to the inhabitants of Japan and the Philippines, come to life away down in the Pacific to the southeast of the Archipelago, gyrate about till they gain strength enough to swirl up along the Cordilleras on the back coast of Luzon, cut through a gap in the mountains some 100 miles north of Manila, and then sizzle over to Formosa and the China coast on their destructive voyages to Japan.

The typhoons, anywhere from 50 to 200 miles in diameter, move forward at a slow rate of perhaps only 10 or 12 miles an hour, but the winds inside the circle often acquire a rotary speed of more than 120 miles an hour. Manila, owing to her position behind the mountains of the east coast, below the gap through which these disturbances are wont to cross into the China Sea, rarely gets more than a good taste of the blow, but now and then a typhoon which has lost its way will sail squarely across the town and carry off the roofs of a thousand or two houses in its efforts to find out where it is bound.

The excellent meteorological observatory in Manila, which hitherto was conducted by the Jesuit priests, has had the reputation of being the most complete institution of its kind east of Naples and west of Washington, usually gives warning of the approach of these typhoons a day or so before their actual arrival, and the town is therefore ready to receive them. But once in a while, as in the case of the great storm back in the eighties, the elements give an exhibition without previous notice. The last typhoon, which almost razed Manila to the ground, came from a clear sky, and was so narrow in diameter and moved so fast that in four hours it had come and gone. It struck the city at about 10 A.M., and the deadly gale unroofed houses, blew buildings bodily over, picked up carriages and carried them up the streets, and prostrated trees and wires in all directions. Shortly before noon the wind and rain ceased, the sun came out pleasantly, and every one thought danger was over. But it was merely the calm spot, in the center of the cyclone's vortex, passing over the city, and by 12.30 P.M. tremendous squalls were coming from an exactly opposite quarter to those of an hour before. The roofs which were not carried off by the earlier winds were ripped up like so much paper under the force applied in the new direction, native houses, sheltered, perhaps, from the northeast, were carried off by the terrific gale from the southwest, big logs from lumber-yards were caught up and hurled across the River Pasig, and every ship in the bay—big or little—broke adrift, to be washed high and dry on the beach.

Happily, Manila is not often visited by such disturbances as the one above recorded, but nevertheless it is not beyond the bounds of probability that the foreign resident may some day suffer a similar experience to that encountered by my friend the Englishman, who, after a heavy blow, returned from his office to find only his upright piano standing on the spot where he had left his light-built house in the morning, the rest of his things having journeyed on to the next village.

With the blows and rains of the months from July to October come the floods, and as Manila proper is scarcely more than a foot or two above high water, the land is often covered with the overflow of the Pasig, which is unable to handle all the water that is dumped into it by the big lake—Laguna de Bay—sleeping up country at the foot of the hills. This latter, shaped something like an exaggerated "W," forty miles from point to point, is a vast slop-basin, into which run all the washings from the mountain slopes that surround it. It lies almost four feet above the level of Manila itself, and its only outlet is the River Pasig, which, nine or ten miles in length, wobbles down through the very heart of Manila to the bay, and carries off the surplus water discarded by the lake. For years and years the inhabitants of the capital have long thought that a sudden earthquake would send this vast mass of water tumbling down over the low land, which exists only on that side of the lake nearest to Manila, and every successive flood only seems to make them feel that their city is literally between the devil and the deep sea.

Curious as it may seem, the city is never healthier than during these periods when boats take the place of carriages and dry ground is at a premium. For Manila is practically without a drainage system, and what is not looked after by the pigs or dried up by the hot sun must be gotten rid of by other means.

To conclude, then, the climate of Manila is not unbearable. In the winter months the breezes of the northeast monsoon, which blows for the best part of five months, keep the mercury from flying high, and bring clear days and cool nights. In the lull between the monsoons comes the hot weather of March, April, and May that is harder to bear, but with the advent of the southwest trades, the sea breeze takes heart, and with its friends, the clouds and

rain, makes one forget the temperature in his efforts to keep the mold out of his clothes or the roof on his house.

YELLOW FEVER; ITS DIAGNOSIS AND TREATMENT.

BY J. EDWARD STUBBERT, M.D.,
OF NEW YORK;
LECTURER ON TROPICAL DISEASES, UNIVERSITY BELLEVUE HOSPITAL MEDICAL COLLEGE; LATE CHIEF SURGEON OF THE NICARAGUA CANAL COMPANY.

THE despatches from Surgeon-General Sternberg, announcing the presence of yellow fever among our troops in front of Santiago, have caused widespread anxiety among American homes. While we have no reason to doubt the fact of the presence of the dread disease in our camps, there is considerable encouragement in the statement of Dr. Valiente that there is no especial danger from yellow fever along the southern coast, and that the prevailing fever in that section during the rainy season is of malarial origin. The reserve of Dr. Sternberg is well advised, and he undoubtedly recognizes the danger of the panic that is universally present in districts infected with yellow fever. In West-Indian districts yellow fever and malarial fevers are generally concomitant, and it is often very difficult for experts to determine between the former and pernicious malaria. Greater uncertainty and confusion will necessarily occur among our surgeons, most of whom have never had the opportunity of becoming familiar with the two diseases; therefore, considerable allowance must be made for the reports we see daily in the press of "additional cases," and a large percentage assumed to be of coast fever.

The yellow-fever germ depends for existence upon humidity, heat, and a certain amount of filth and unsanitary conditions. The bacillus icteroides does not live as a rule on high ground on sites exposed to sunshine and breezes. The means of infection in the present epidemic is probably to be located in the large number of refugees who were allowed to enter our camps; this was a mistake that cannot be remedied, but should have been foreseen, and will be a warning to the Medical Department of the Army in Porto Rico, and at other points in Cuba.

The questions before our surgeons at the present moment are: (1) prophylaxis; (2) diagnosis; (3) treatment. Prophylaxis should consist in an iron-bound quarantine absolutely controlled by the Medical Department. Red tape and bureaucracy may be feasible in delaying military movements, for the enemy may also be slow; not so with yellow fever; the Medical Department must be free to act promptly as necessity indicates. As far as possible negroes and immune troops should be used in and around Santiago; those not so classified should be placed in camps on elevations overlooking the sea when possible; if not, then on high points inland. There should be conveniently located suspect and pest camps; there should be a medical inspection every day, when the surgeons should carefully overlook every soldier, select out even mildly suspicious cases, and send them to the suspect camp until it be determined whether the case be one of malarial or yellow fever. At all points where patients have been located clothing, tents, brush, and everything else capable of providing a lodgment for the germ should be destroyed by fire or thoroughly disinfected. If such rigorous methods are employed there is little danger of the establishment of more foci of disease among our camps.

During the work on the Nicaragua Canal not a single focus of this disease was established along the Company's line, although yellow fever was present each year on the same coast directly north and south of the Company's headquarters, and there were daily arrivals of steamers and small schooners at the ports. On the Pacific Coast of Nicaragua each year yellow fever appears in the cities located along the line of railroad from Corinto. The comparative immunity on the Atlantic side was due undoubtedly to rigorous quarantine and prophylaxis, in the application of which the Medical Department of the Canal Company recognized no superior in taking orders or seeking advice. For bureaucracy yellow fever has no respect.

Diagnosis.—The scientific method of diagnosis by the agglutination tests are of great value, as Tonatre has said, in labelling the disease, but in camp work the greatest reliance must be placed upon clinical diagnosis. The serum test is more accurate on the second day of the disease than later, but there are clinical features which, to an eye accustomed to the symptoms of yellow fever, will infallibly establish the diagnosis in a vast majority of cases during the first day. Neither can the surgeon invariably exclude yellow fever on account of the presence of the malarial plasmodium.

Symptoms.—Some cases are ushered in by the historical chill, but all are preceded by rigors of more or less severity. In most instances the facial expression is characteristic, congestion of the whole countenance and suffusion of the eyes, accompanied by pain in the back and limbs, and very severe bilateral-frontal and postorbital headache. The initial temperature is usually about 102° F. and the average maximum, less than 104° F., is reached generally within the first six hours of the disease. The remission occurs sometimes on the third day, rarely on the fifth, generally on the fourth, and lasts, on an

average, six hours. The average length of the third stage is three days. Black vomit appears in most cases as early as the third day, but nausea is present from the incipiency of the disease. Decrease of the amount of urine is observed on the second day in nearly every case, and albumin on the third or fourth day. It will be found in large quantities in about 98 per cent. of the cases under observation, and will rarely be absent. In a number of cases treated by the writer the application of the heat test alone was sufficient to coagulate the urine into a solid mass that would remain in an inverted test-tube. The amount of albumin seems to have no relative effect upon the rapidity with which the urine clears up during the stage of decline. In most cases the albumin will disappear suddenly with the fall of temperature during the third stage of the disease, but in exceptional instances traces are discernible for some time during convalescence. Jaundice is by no means a constant symptom, and rarely is it present before the fifth or sixth day.

Constipation is found in most cases all through the disease, sometimes diarrhea supervenes during the third stage, and at times, where intense general jaundice is present, the defecations are pasty and clay-colored. In a majority of patients the mind will remain clear until the end of the disease, whether that end be reached in death or recovery. The pulse is generally slow, and there is a wide divergence between it and the temperature. Some cases are marked by great depression, intermittency of the pulse, algid surface, and during the third stage a great difference between the sublingual and rectal temperatures; the former was, in one patient of the writer's, 99.2° while the rectal was 102.6° F. Generally on the night of the third day or morning of the fourth the temperature drops *suddenly* three to four degrees, ushering in the stage of remission or quietude; at its close the temperature again rises to nearly the height attained in the first stage, and then in favorable cases begins to decline by lysis; in fatal cases the stage of remission is very short and followed by a high remittent temperature. In abortive cases, especially when the epidemic is on the decline, convalescence follows immediately upon the stage of remission. During the third stage, or that of decline, the temperature and pulse gradually approximate.

The disease most likely to be confounded with yellow fever in our Santiago camps is pernicious malaria; the following comparison presents their most prominent points of differentiation.

Dengue or break-bone fever is a disease having its habitat in warm climates, and has been confounded with mild cases of yellow fever. The reason is not apparent, for their clinical histories are distinct. The following table shows a comparison of the more prominent symptoms common to both diseases:

YELLOW FEVER.	PERNICIOUS MALARIA.
Headache bilateral-frontal, and post-orbital.	Headache generally unilateral frontal, and temporal.
Temperature and pulse divergent; temperature rarely higher than 104° F.	Temperature and pulse correlative; temperature generally 105° to 107° F.
Albumin present in large quantities early in the disease.	Albumin rarely present.
Quinin has no effect on the progress of the disease.	Quinin has a specific effect if given hypodermically and early.
Stage of remission on third or fourth day.	Remission not present.
Attacks new arrivals.	Generally history of chronic malarial infection.
Always history of exposure to infection.	No history of exposure to infection.
Black vomit appears on third or fourth day.	Black vomit appears within thirty-six hours.
Hematuria very rarely present.	Hematuria a marked symptom.
Liver unchanged.	Liver enlarged and tender.

YELLOW FEVER.	DENGUE FEVER.
Cephalalgia and nephralgia are the characteristic pains, and are constant.	Pain most severe in joints and muscles, and is *paroxysmal.*
Pulse and temperature divergent.	Pulse and temperature correlative.
The slowing of the pulse begins early in the disease.	The slowing of the pulse occurs late in the disease.
Congestion of face early in the disease. No edema.	Rash on face, followed quickly by edema.
Albuminuria.	Albuminuria absent.
Icterus.	Icterus absent.
Black vomit.	Black vomit absent.
No eruption.	Polymorphous eruption, followed by desquamation.

Treatment.—The mortality of yellow fever has been decreased considerably in recent years. General Sternberg's treatment has given the remarkably low death-rate of 15.9 per cent. in Havana, 7.3 per cent. in the United States, Brazil, and Cuba, and 4.7 per cent. in Florida. The average death-rates range between twenty and fifty per cent.

While awaiting the full development of the antitoxin of Sanarelli, our treatment of this disease must be expectant and symptomatic, together with careful nursing. All authorities agree upon the first two steps to be taken: Purge the patient with a single dose of one-half to a full tumblerful of castor oil; then produce profuse diaphoresis either by hot air or mustard pediluvia. After the first cathartic has acted freely, a gentle daily movement of the bowels should be maintained by the following:

℞ Magnesiæ sulph.
Magnesiæ carb. } aa . . 15.00
Sulphur precipitatis
Sacch. lactis
Pulv. anisi } aa . . . 8.00.

M. Sig. Teaspoonful once or twice a day.

This is very necessary to prevent constipation and secondary intoxication.

Diet.—Diet throughout the disease should be restricted to milk and Vichy in equal parts. During the first two or three days the Vichy may be taken alone if more pleasing to the patient. It stimulates hepatic circulation and renal secretion, and some be-

lieve that it dilutes or neutralizes the icteroid toxin. During the second and third stages the patient should be urged to take milk.

Antipyretics.—There will be great temptation to administer antipyrin or some similar drug during the first stage, but unless the temperature rises above 104° F., it would be unadvisable, because yellow fever is a cyclic disease that cannot thus be turned from its course, and because of the danger of cardiac depression in the second stage. Baths are of doubtful benefit, excepting for the comfort of the patient. The urine should be measured and examined twice a day, and at the first signs of suppression 1/100 of a grain of nitroglycerin given for two to three doses at intervals of six hours, and followed by digitalis and saline diuretics. Poultices are of occasional benefit. A cardinal point of treatment is to produce copious diuresis. If this be accomplished the patient will generally recover. The larger quantity of urine passed the smaller will be the percentage of albumin, and, therefore, in direct ratio, the less danger of death. Buanger-Ferand has recommended large enemata of cold water to reduce the temperature. Undoubtedly this would be one result of such injections, but a more important one, to my mind, would be the diuresis thus established. These enemata should be given twice a day in as large quantities as can be retained and absorbed by the rectum.

Nausea and Vomiting.—Most authorities are opposed to the use of emetics in this disease. However, the writer has seen the most gratifying results follow a single emetic dose of ipecac if given as soon as a *tendency to vomit* is shown in the first stage. If this be followed by copious draughts of tepid water until the stomach is well cleaned, and then ¼ of a grain of morphin given hypodermatically to quiet the stomach, the patient will feel much relieved, and thereafter will experience very much less nausea. This special treatment should never be entrusted to a nurse. Ipecac or morphin given at the wrong time are capable of great harm to the patient, but there is a moment, generally once only in the first stage, when their intelligent use seems to be indicated. It appears to abate severe gastric disturbances. Other symptomatic treatment for nausea consists of the use of ¼ of a grain of carbolic acid in one dram of peppermint-water every two or three hours, cracked ice, and sinapisms.

Morphin.—Much opposition is recorded against the use of opiates in yellow fever. In the abstract the objections are well founded, especially where there is much danger of anuria. There can be no infallible rule laid down, I believe, but the physician should be governed by symptoms, always bearing in mind the danger of suppression of urine. Given a case in which diuresis is well established, or even in which it is fairly copious, I believe the very occasional administration of $\frac{1}{12}$ to ¼ of a grain of morphin hypodermatically is not only justified, but indicated, to quiet the jactitations of the patients, and to relieve the nausea that does not yield to the other remedies suggested. If carefully watched there can be no danger to the patient, and the relief obtained does much toward conserving strength for the stage of depression. During the epidemic in Salvador in 1894 the German and native physicians steadfastly refused to administer morphin because theoretically wrong. The writer used it from two to six times in nearly every case. The results, eleven-per-cent. fatality, as against over forty-per-cent. fatality among the patients of the German and native physicians, would seem to indicate that practice is at times better for the patient than theory.

Stimulants.—Champagne is very universally used, as well as brandy. They should be given in small quantities, often repeated, and ice cold. Kola is strongly advocated by the French school, but I have seldom seen good results from its use, and it certainly is distasteful to the patient.

A summary of treatment may be, primarily, free catharsis and diaphoresis. Secondarily, constant avoidance of anuria and constipation, mild gastric and intestinal antisepsis, careful watching for and combating advance symptoms, and good nursing. Add to this Tonotri's excellent advice, "Battle to the last," and many patients who are apparently hopelessly ill may be saved.

THE ARMY HOSPITAL AT SIBONEY.[1]

BY RAYMOND SPEAR, M.D.,
ASSISTANT-SURGEON, UNITED STATES NAVY, ON BOARD FLAGSHIP "NEW YORK."

THE army general hospital for the wounded and sick soldiers attached to the army before Santiago is situated at Siboney, about eight miles distant from Santiago. When a man is wounded at the front he retires to the rear and receives a first-aid dressing, and is sent to a divisional hospital; from here he is conveyed to the general hospital at Siboney by an ambulance. The roads are very rough and it requires a certain amount of strength to stand the journey, therefore, those who have been very badly wounded are retained at the divisional hospital until they are able to bear transportation.

The hospital is composed of wards made by plac-

[1] Surgeon Spear's paper here printed was mailed from the flagship "New York" on July 7th, but was delayed in transmission. It will be remembered that shortly after that date, by order of General Miles, Siboney was completely destroyed by fire on account of its unsanitary condition, and in order to lessen the danger of infection among the refugees and troops.—ED.

ing tents end to end; the operating-room is constructed in the same manner, and contains six operating-tables and baths for instruments, etc. The wounded are all taken into the operating-room as soon as possible. Here their wounds are dressed, necessary operations performed, a tag, upon which is written the patient's name and company, the injury, what was done, and when the wound requires a new dressing, is pinned to the clothing of each, and they are then sent to the ward and placed on a cot.

During the time this little operating-room has been in service more operations have been performed in it than in any other place of its size in the history of the world. Wounds of every organ in the body have been treated on the six tables around which worked Army and Navy, civilian, Red Cross, and Cuban doctors, assisted by Red-Cross nurses and Army hospital stewards and attendants. It was a novel sight to see difficult brain operations being performed by candle light in more than one instance.

The wounds treated were produced principally by Mauser bullets; others were inflicted by No. .43-caliber brass-jacketed balls, and still others were by flying pieces of shells. The wounds were very easy to distinguish; the small Mauser bullet many times made nothing but a small perforating wound, the tissues not being lacerated in the least. When they struck a bone the latter was either perforated, grooved, or splintered, but never badly, only a few amputations being required for this reason. The brass-jacketed bullet, on the other hand, lacerated everything it struck, soft and hard tissues alike. The injuries from the fragments of shell varied according to the size of the piece of projectile, from slight to severe wounds. The wound of exit of almost all of the bullets was larger than that of entrance. Many times, however, the exit-wound produced by a Mauser bullet was about the same size as the entrance-wound, and it was with difficulty that they could be distinguished.

A curious fact was the number of Mauser bullets that were found lodged in the tissues. Probably twenty per cent. did not penetrate deeply. This was contrary to expectation, the range and velocity of this ball being so great. It may be explained by the fact that the Spanish ammunition may have been old, or the leaves and grass through which many of the bullets passed impeded their course, or the elasticity of the living tissues may have had some effect on it.

Most of the killed received their wound in the head and abdomen. It is surprising what the human body can stand. In the hospital tents one can speak with men who have bullet wounds through their brains and hearts; soldiers possessing punctured lungs and livers walk about with little discomfort. There were quite a number of brain cases. These patients were all operated on, and so far have done remarkably well. Large pieces of bone and brain matter were frequently removed, with apparently little effect on the patient other than a beneficial one. There were a few cases of undoubted heart wounds, the subjects of which were getting along nicely.

Lung wounds were frequent, many patients proudly showing two separate punctures, and the only symptoms they presented were a little pain on breathing, and some coughing up of slight quantities of blood. Traumatic pneumonia has been very rare.

There were some penetrating wounds of the abdomen by the Mauser bullets that presented no symptoms whatever. These cases were rare, however, showing that most of those who received abdominal wounds had probably died, as they were not brought into the hospital.

The testicles and penis were not exempt from wounds, but the small bullet did not do very much damage in these localities. There has not been a case requiring castration or amputation of the penis up to date. The arteries did not escape the Mauser. There were quite a number of severed or injured arteries which resulted in traumatic aneurisms. These patients usually presented discoloration by effused blood in the surrounding parts, swelling, pain from pressure on the surrounding nerves, and a pulsating tumor.

The wounds of the bones were very interesting. The old bullet produced such shattering and splintering of the bones of the extremities that amputation was frequently indicated. The small, modern bullet makes amputation comparatively rare, resections and removal of splinters and drainage being all that is necessary.

There were many peculiar cases. One man was shot through the head, the ball entering his left ear and coming out just under his right eye, apparently not incapacitating him in the least. Another man was shot through the longitudinal sinus and cerebellum, and will live to tell all about it. On the other hand, there were men who were shot through both eyes, and will never see again. But these are the fortunes of war, and all must learn to bear them.

There was a small percentage of infected cases. This was due to the first-aid dressings which were applied. Some of the men being under fire could not have their wounds dressed for several hours, and these were the cases which seemed to constitute the large proportion of the infected class. If the wounds had been sealed with collodion immediately the proportion of infected cases would in all probability have been less.

AGUINALDO AND THE PHILIPPINE REPUBLIC —MEASLES IN THE TROPICS—A UNIQUE LOVE TOKEN—INCONVENIENCES OF AN INLAND CAMPAIGN.

[From Our Special Correspondent.]

WITH ADMIRAL DEWEY'S SQUADRON, OFF MANILA, PHILIPPINE ISLANDS, June 6, 1898.

THE situation here is becoming more complicated every day. The Americans are watching in vain for reinforcements, the Spaniards are scanning the horizon for signs of the four Spanish battle-ships which the Archbishop, in his last proclamation, declared were on their way, and the insurgents under Aguinaldo are talking of the new republic which is to be inaugurated under the protection of "the great American nation," as their leader calls the United States in his proclamation to the natives under date of May 24th.

Since my last letter I have spent some time on shore, and thanks to a smattering of Spanish, picked up in South America, have been able to make my way about Binondo and the outlying wards of Manila without molestation. Various subterfuges are resorted to by American newspaper correspondents to enable them to remain safely in Manila during the present panic. I know of one who passes himself off as a German from Berlin, and another who is supposed by the Spanish officers with whom he fraternizes to be employed by a French paper. Non-combatants are taking refuge at Cavité almost daily, and there are ten ships lying in the river waiting to carry away foreign residents when Dewey shall give notice that the bombardment of Manila is about to begin. What is to be done with the Spanish women and children is still a mystery, for they would not be safe in the interior, where the insurgents, flushed with the scent of victory in the air, can hardly be restrained.

The dignitaries of the Spanish Church, who doubtless fear that their occupation will be gone if the *ægis* of a great Protestant power like the United States is thrown around the ignorant and superstitious people on the fruits of whose labor they have fattened so long, are doing what they can to instil into the minds of their parishioners the belief that if Manila falls into the hands of the Americans all Spanish prisoners, including priests, will be put to death, the property of the Church confiscated, and the Protestant religion enforced at the point of the sword. Absurd as this may seem to an American, it is readily believed by the more ignorant subjects of Spain, for the reason that their country has for centuries waged war in just that way. With all due respect to the Roman Catholic religion, it is impossible to speak without condemnation of the Spanish Church as maintained in the Philippine Islands. Nearly $1,500,000 was set apart in one year for the benefit of the Church and its clergy, all this and much more having been extorted by the Spanish Government in fees, taxes, etc., from the poor, underpaid native toilers, while such public improvements as were absolutely indispensable were grudgingly accorded the munificent sum of $6000. Furthermore, the $1,500,000 given to the clergy and religious societies did not include the amounts paid to the priests for marriages, baptisms, indulgences, scapularies, etc., which are pocketed on the spot, and which amount during the year to a sum equal to that accorded to them by the Government. Considering the extortionate demands of the Church and the Government, and the petty peculations of every member of the Spanish official machine, is it any wonder that the down-trodden natives have rebelled at last against the rule of despotic and uncivilized Spain?

The Manila newspapers which, like everything else, are controlled by the Government, publish sensational stories about the "Yankee pigs" and the injuries they are supposed to have received in the battle of May 1st. Admiral Dewey is taking every precaution for the safety and welfare of his sailors. He has given orders that Cavité, now occupied chiefly by the insurgents and refugees, be made as sanitary as possible, and while a few cases of measles have broken out, as a rule the health of all is good. In the tropics measles is not the trifling infantile disease which it is in temperate climates, for here it ranks with smallpox and cholera in the estimation of the quarantine authorities, who will not open a port to any ship having a case of measles on board. This disease, which the inhabitants of a colder climate take little pains to avoid, and place in the same category with whooping-cough and other diseases of infancy, is so contagious in these islands and the percentage of death among its victims is so great, that a few cases among our soldiers would be really a more serious matter than a stranger to these latitudes would be apt to think.

The physicians accompanying the American troops to the Philippines may be called upon to treat several diseases with which they have had a very limited experience, or no experience at all. Among these may be mentioned what is called tropical abscess of the liver, elephantiasis, beriberi, etc. The former is not very common but is often fatal, the prognosis depending principally on the direction in which the abscess ruptures. Elephantiasis is encountered in its most virulent form. I have only seen one case of this and the victim was a most revolting object. Beriberi I have discussed pretty thoroughly in a previous letter. All of these diseases are more common among the natives than among the European

population, possibly because the latter are generally more cleanly than their darker-skinned neighbors.

These natives are very interesting, regarded from almost any standpoint, and some of their beliefs and customs must have come down to them from remote antiquity. There is an old idea, common to the people of many different races, that contact with a person's perspiration may excite the most passionate love. The attempt to attract a person of the opposite sex by means of the perspiration probably gave rise to a curious custom which prevails among the Philippinos. When two young people who are engaged to be married are compelled to separate for a time, they exchange articles of clothing, each believing that thus the faithfulness of the absent one will be assured. These articles are carefully treasured, being kissed and smelled of whenever an opportunity offers, and, whether by reason of some magnetic property with which the clothing of the person may have been endowed or by the odor of the perspiration as supposed, these keepsakes are said rarely to fail in the purpose for which they are given.

In speaking of the natives it is necessary to distinguish the Tagals, who occupy the greater part of Luzon and the smaller islands near by, from the Negritos who are of a much lower order of humanity and on some of the more remote islands are as wild as Hottentots. Stories are told of human sacrifices offered by these people to their heathen gods. Then there are the various tribes in the southern and the extreme northern parts of the archipelago, who are unlike both the Tagals and the Negritos. Each of these tribes has its own language, there being, it is said, as many as twenty different dialects spoken by the various native tribes. The Negritos in Luzon are mostly servants and laborers. These various tribes are of course mixed with each other, and in Manila and vicinity many of the natives have a trace of Spanish blood.

The principal followers of Aguinaldo are the Tagals and mixed descendants of Tagals, Malays, and half-castes, many of whom are well-to-do and a few educated; but the great mass of the population is ignorant and uncivilized and utterly incapable of self-government, not one per cent. of the inhabitants of these islands being able to read. If Aguinaldo thinks that he can form a stable republic out of such material, he is indulging in a wild dream from which he will soon be rudely awakened. The man seems to be quite ignorant of diplomacy, for more than a week ago he had a conference with the German Admiral on board the German flagship. A rupture between the Americans and the Philippinos is evidently what the Germans are trying to bring about; but if Aguinaldo should be so unfortunate as to estrange Admiral Dewey by his unwise actions, he might a once and forever say good by to his schemes for making himself President of the Philippine Republic. The expected arrival of our transports will probably put a new face on the whole matter. If, as we have reason to suppose, the troops are aided by the insurgents, or at least are not opposed by them, the taking of Manila ought to be an easy task. The Spanish are taking great pains to fortify the water front, but very little preparation has been made to ward off a possible attack from the land side. It is to be hoped that the city can be taken by Admiral Dewey and our occupation of the Philippines perfected without sending the troops to fight in the interior, as tropical warfare is something to which our soldiers are quite unaccustomed. A naval victory is one thing and an army victory is quite another. After Dewey had fought the greatest naval battle of modern times, in which he totally annihilated the Spanish fleet, the men on the ships washed their hands and ate their dinner with appetites whetted by the thought that not one comrade had been killed. If a battle of equal importance had been fought in the interior behind Manila, the killed and wounded would have been numbered in the hundreds.

If our soldiers are obliged to march any considerable distance, the dense tropical vegetation, the tough vines and briars will doubtless make their progress very difficult. Then there is the question of water, for the streams in the Philippines are so infested with leeches as to make drinking from them very dangerous. To swallow a leech is a very serious accident and one often followed by hemorrhage from the stomach, pains, and convulsions. It may be remembered that the soldiers in Napoleon's Egyptian campaign frequently swallowed leeches, with very disagreeable, and sometimes fatal, effect.

Soldiering in the Philippines will be accompanied by many inconveniences. Sleeping on the ground is not conducive to peaceful dreams in a country where snakes are as common as they are here and where myriads of tiny worms and insects drop on or crawl over the sleeper, some of the former having a disagreeable habit of crawling into one's ears. The natives have a superstition that the centipede can make its way through the ear until it reaches the brain and causes death. Of course this is not true, but there is no doubt that an insect in the ear may cause excruciating pain. These are only a very few of the many annoyances and dangers which our soldiers will be obliged to endure, and it is to be hoped that whoever has charge of the commissary department of the American Army will make some allowance for the climate and not feed the men on fat bacon three times a day.

CLINICAL MEMORANDUM.

GUNSHOT WOUND OF THE ABDOMEN: TEN INTESTINAL PERFORATIONS AND TWELVE PERFORATIONS OF THE MESENTERY; OPERATION; RECOVERY.

By GEORGE TULLY VAUGHAN, M.D.,
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G. A. F., white, male, aged thirty-one years, native of Virginia, was admitted to the Emergency Hospital during the night of May 26, 1898, having just been shot in the abdomen with a pistol. When seen by me, a little more than one hour after the shooting, his condition was very good. Pulse 84; temperature not taken; there was no nausea, vomiting, or evidence of shock; but the patient complained of severe paroxysms of pain in the abdomen. The wound was in the left side of the abdomen, about two centimeters (¾ of an inch) above the center of a line drawn from the navel to the anterior superior spinous process of the ilium, but a little nearer the navel. Blood was oozing steadily from the wound. It was impossible to decide from the symptoms present whether or not the viscera had been injured. Injections per rectum of gas or water were not made use of on account of the danger of forcing intestinal contents into the peritoneal cavity in case the intestine had been wounded. It was thought safer and more satisfactory to explore the wound with probe and finger, enlarging it as might be necessary for this purpose.

The patient having been chloroformed and the surface carefully cleansed as if for abdominal section, attempts were made to introduce a probe into the peritoneal cavity, but the effort failed, probably owing to the muscles having been contracted when perforated, their subsequent relaxation interposing sound tissue across the track of the ball. Accordingly the probe was introduced as deep as it would enter and the tissues were divided to this depth for a space of about six centimeters (2½ inches). The probe was then introduced at a different angle and the tissues again divided, when it was found that the probe entered the peritoneal cavity, its entrance being followed by a free discharge of blood. The incision in the skin and muscles was rapidly extended to about thirteen centimeters (5¼ inches) and the peritoneum incised, blood flowing freely from the cavity.

The first coil of intestine which presented was drawn carefully through the wound and examined. Not more than ten centimeters had been thus drawn out before a perforation was found, there being two openings, one of entrance and the other of exit. These were closed and further search made, the coils of intestine being surrounded by flannel cloths wrung out of hot salt solution and replaced at one end while they were being drawn out at the other. Eight openings were found in what was thought to be the lower part of the jejunum and two in the ileum. There were six perforations of the mesentery, or twelve openings in all, the wounds of entrance and exit in the mesentery being closed separately. The ten perforations of the intestine and twelve of the mesentery made a total of twenty-two openings. Twenty of these openings were closed by sutures; two in the mesentery were not bleeding and were passed over. A round sewing needle with fine silk was used, the mattrass suture introduced including simply the serous and subserous tissues exclusive of mucous membrane, thus approximating the serous surfaces. The line of sutures was transverse to the long axis of the intestine. The wounds in the mesentery were closed in the same way. In a few of the large wounds of the intestine, where the ball had evidently cut through the convex border of the gut, making a single, very ragged, large opening, instead of two small openings, two sets of sutures where used, the first to approximate the edges, and the second, the mattrass suture as already mentioned. In all other places a single row of sutures was used, the threads being placed about half a centimeter apart (five to an inch). The bleeding was chiefly from the mesentery and the vessels were controlled by the sutures. There was about half a pint of blood in the abdominal cavity. The ball, a .38-caliber, was found wrapped in a portion of the great omentum. It was not scarred or flattened, evidently not having struck a bone or other hard object.

Fortunately the portion of intestine wounded, included in a length of about two meters of the jejunum and ileum, was empty of fecal matter and none was detected in the peritoneal cavity; but the cavity was thoroughly irrigated with about 10,000 cubic centimeters of warm salt solution. The entire length of the small intestine was examined by sight and the large intestine, stomach, kidneys, liver, and spleen by palpation. The wound in the abdomen was closed by means of interrupted silkworm-gut sutures, including skin, muscle and peritoneum, without drainage. Pulse 124 at close of the operation, which lasted 2½ hours. The patient suffered considerable pain on recovering from the anesthetic (chloroform) and was given .015 gram (approximately ¼ of a grain) of morphin hypodermatically.

May 27th. Patient slept very little; is nauseated. Ordered sulphate of magnesia, four grams (60 grains) every hour until bowels should act. After taking two ounces the bowels moved four or five times and the nausea and other symptoms improved. Temperature, in axilla, 38° C. (100° F.), both morning and evening. Pulse 120 in morning, 104 in evening. May 28th. Temperature 37.2° C. in morning, 37.4° C. evening. Pulse 104 in morning and evening. May 29th. Temperature 37° C. (98° F.); pulse 80. After this the pulse and temperature were practically normal; once for some unknown reason the temperature rose to 38.8° C. The patient had no opiates after the 29th. June 10th. First dressing; stitches removed. There was primary union throughout except at the point of entrance of the bullet and a short distance below, both of which were covered by small scabs. A few drops of pus exuded where some of the sutures passed through the skin. June 12th. Patient allowed to get up, abdomen being well supported by a flannel bandage. June 19th. Patient walking about; still small scabs over the two points mentioned.

June 24th. Patient well; appetite good, bowels act fairly well, occasionally requiring salts or an enema. Complains of a little stiffness about the wound. Discharged from treatment.

MEDICAL PROGRESS.

Egyptian Medical Tattooing.—FOUQUET (*Centralbl. f. Chir.*, June 25, 1898) found upon the body of a priestess who was embalmed in the 11th Dynasty—about 3000 years B. C.—linear blue marks which he at first supposed were for ornament but which he afterward concluded were the result of some vigorous application of remedies. The marks were both below and above the umbilicus, those below running almost horizontally while those above it ran in a vertical direction. The surgical measures were evidently taken a long time before the death of the woman, and were perhaps intended to cure her of some pelvic trouble, chronic pelvic peritonitis or whatnot. This method of introducing drugs into the body is still practised in Egypt, and the writer was able to collect details of ninety-seven cases in which it was employed. In most of them the tattooing was done upon the temples for the relief of headache or neuralgia, but in other cases the scarification was made upon the hands, feet, shoulders, knees, buttocks, neck, or abdomen. The technic of this treatment is as follows: From three to seven needles, which are bound together in a bunch, are thrust obliquely into the skin. When blood begins to flow from the punctures thus made, a mixture of milk and soot, to which the juice of various plants has been added, is rubbed into the wounds.

A New Method of Disinfecting Rooms with Formalin.—SCHLOSSMANN (*Berlin. Klin. Wochenschr.*, June 20, 1898) describes an apparatus for the disinfection of rooms by formalin, which he and WALTHER have devised, and which gives a far more perfect disinfection and in a much shorter time than any apparatus yet brought forward. Steam from a kettle of boiling water passes into the reservoir full of a mixture of ten parts of forty-per-cent. formaldehyd (formalin) and one part glycerin. From this reservoir through four escape pipes there passes off a vapor composed of formalin, glycerin, and water. Ten minutes after the apparatus is set going in a room 16x14x10 feet the fog is so dense that it is impossible to determine if an incandescent lamp in the center of the room is lighted. In less than three hours all germs of whatever sort that were in the room will have been killed. The advantages claimed for this method of using formalin are.

1. Absolute sterilization.

2. It is not necessary to paste up tight the windows and doors; on the contrary a little draft is of benefit.

3. The apparatus is so constructed that it produces currents of air and so insures the sterilization of all the air in the room.

4. The maximum time required is three hours, as compared to twenty-four hours required by the Trillat or Schering methods.

5. The apparatus, which is made by Lingner of Dresden, costs little to operate; and like other formalin methods of disinfection it possesses the advantage that all articles may be left in the room without fear of injury.

6. It is easy to use and as it never has a pressure of more than half an atmosphere there is no danger of an explosion.

7. The fog of glycerin-formaldehyd—a combination which the writers call glycoform—is heavier than the air. By the energy of the apparatus it is driven against the ceiling of the room and then sinks slowly to the ground, bringing with it mechanically all the germs in the air.

8. The disinfecting power of the apparatus is only limited by the penetrating power of the gas. Wherever the gas penetrates so far will there be sterilization.

At the end of the disinfection the windows are opened and the room is aired. Enough ammonia is sprinkled about to neutralize the smell of the formaldehyd, and in a short time the room is absolutely odorless. The method is simple enough to one who understands it, but it is better for the sake of thoroughness that it should not be turned over to the hands of the householder, but should be carried out by some one who has had special instruction in the method.

A Comparison between Dry and Moist Thiersch Grafts.—ENDERLEN (*Deut. Zeitschr. f. Chir.*, vol. 48, p. 1) has experimented with Thiersch grafts in order to test their vitality and power of growth after they have been dried for a number of days. He found that they would adhere when planted, and grow, although they had been preserved dry for several days in Petri dishes, but their growth under such circumstances was by no means as active as that of fresh grafts, or of those which had been kept for a like time in sterile salt solution. As the centers of grafts which are kept in a dry state for three or four days are not yet entirely dry, it is scarcely fair to say that dried grafts will grow. Those which were quite dry and hard did not in any case show signs of cell multiplication. Grafts prepared according to the rules laid down by Thiersch adhered better and grew faster than those prepared according to Krause's method, or in long strips. The writer says that the growth of epithelium from sweat-glands is very apt to lead one into error as to the power of growth of a graft. In his preservation experiments he found that the epithelium is much more enduring than the cutis, which goes to pieces in four days or less, even though it be preserved in a moist condition.

Pelvic Examination in an Inclined Position.—JAYLE (*La Presse Med.*, June 22, 1898) says that there are great advantages to be gained in the examination of difficult gynecologic cases from an inverted inclined position of the patient. This position is essentially that known as Trendelenburg's except that the patient instead of hanging by her knees, rests with her shoulders against two blocks, while the head is raised upon a cushion. This avoids the unpleasant rush of blood to the head, and at the same time it leaves the pelvis free from any strain and easily movable as the examiner may desire.

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SATURDAY, JULY 23, 1898.

YELLOW FEVER AMONG THE TROOPS.

THE dread news that the scourge, yellow fever, has invaded the army at Santiago has been received. This, indeed, was expected, and occasions no surprise, neither should it cause panic nor serious alarm. Now that the trenches are no longer occupied an epidemic among the American soldiers is not to be feared. Thus far, the number of cases is limited and the nature of the disease is mild.

British experience in Jamaica has demonstrated the possibility of rendering a garrison, stationed in the tropics, comparatively free from yellow fever. This has been accomplished by removing the camp from the immediate vicinity of the coast towns, and locating the station at as high a level as can be conveniently reached, providing the camp with an abundant supply of good water, and prohibiting intercourse with the native population. It is true that the circumstances attending the Santiago invasion have been such as to contribute, in the fullest degree, to sickness among the troops. The army has been obliged to fight its way through jungle, rain, and mud, and to endure the terrific nervous strain of lying upon its arms for days together, in the face of the enemy, with the hourly expectation of an assault. Such conditions could not have been endured long beneath the sweltering rays of a tropical sun, without widespread and disastrous consequences. Capitulation has come none too soon. A most important factor of the surrender, however, is not the number of prisoners taken, nor the number of arms given up, but the opportunity thus afforded (1) to get the American soldiers out of the trenches and establish a permanent camp on some lofty, accessible plateau, where the water-supply shall be abundant and the drainage good; (2) to secure a similar temporary camp for the prisoners of war; and (3) to segregate the refugees and prevent the possibility of contamination by them. In the meantime, the sick can be carefully isolated and provided with the necessary care and attendance. As Surgeon-Major Summers aptly remarks, "The best possible place to treat yellow fever is a military camp, and the best military camp in the world in which to treat the disease is a United States Army camp."

The type of yellow fever which is indigenous to the eastern part of Cuba is mild and easily controlled by well-known methods, if promptly and efficiently applied. That the very best means of dealing with this disease will be at hand and energetically applied we have every reason to believe. The Surgeon General's department has for years made a careful study of yellow fever; the army is under the immediate care of a score of surgeons, skilled by practical experience in dealing with the disease, and these are supplemented by assistants who, during the past few months, have been carefully instructed in the nature of tropical diseases and all that pertains to their treatment, prevention, and control. Whatever want of preparation then may be justly charged against other departments of the army, happily the medical service finds itself ready to cope with this emergency.

The present is no time for experimentation, but the application of well-known hygienic and sanitary principles can be relied upon to protect the soldier, not only from the invasion of the disease, but from its ravages when it has finally appeared. Sanarelli's serum has not yet been sufficiently tried in the demonstration of its freedom from danger as a prophylactic, to subject any large body of men to its application, nor have its curative properties been found so efficacious as to justify an exclusive dependence upon it as a therapeutic agent.

ADVANCES IN MEDICAL EDUCATION.

THE change from a proprietary medical college to a medical department of an established university is regarded as a movement toward higher education. The predominating personal interest of the faculty is thereby subordinated to the interests of medical education. The public contributes pecuniary assistance more freely, and the equipment and facilities necessary to reach the highest standard are thereby assured.

In New York during the past few months two schools have thus allied themselves with established universities, and it is with no little interest that the medical fraternity is watching the evolution of their plans along these higher lines of medical equipment as well as the broadening influences of the new alliances. One feature that seems to be characteristic of both institutions is an unbounded enlargement of the teaching staff. The advance sheets of the University Bellevue Medical College presents an array of ninety-seven men in its faculty and staff, while the Cornell Medical School is reported to have a still greater number. The effort has been to secure men who have hospital appointments or dispensary positions with the evident idea of securing clinical material. The two schools have seemingly been vying with each other in this direction. It is one thing, however, to pass before medical students a large array of clinical material, but quite another to have this material carefully differentiated and effectively presented to the students' mind. How much attention has been directed to selecting men who have talent and experience as teachers can only be known after this staff has become adjusted to its work.

In the Bellevue College the effort has been made to continue its reputation as a school of clinical instruction, and the circular announces that the facilities for such work will be amply provided by their new building on the corner of First Avenue and Twenty-sixth Street, and the building directly opposite the entrance to Bellevue Hospital.

The laboratory work has been greatly extended both in pathology and bacteriology. Hygiene and sanitation will demand more attention than formerly, and Dr. Doty, the Health-Officer of the Port of New York, will conduct a department in quarantine sanitation. The course of lectures on tropical diseases will doubtless attract men who expect to settle in the South or our newly acquired tropical islands, such as Cuba and the Philippines. This course will be conducted by Dr. J. Edward Stubbert, who has lived for a number of years in the West-Indian Islands and various parts of South America. At the present time he is the resident physician of the Loomis Sanitarium at Liberty, N. Y. Tropical diseases are attracting more and more attention, and it is noticeable that the British Medical Association at its meeting this year has introduced a section devoted exclusively to tropical diseases. This new course established in Bellevue will doubtless prove a popular and valuable innovation.

THE TAXATION OF MEDICINAL PREPARATIONS.

THE principles involved in the new internal revenue law, the passage and enforcement of which has been made necessary in view of the enormous expenditures by the Government in carrying on the conflict with Spain, are upheld by every loyal American, and each will contribute to the income of the National treasury to the extent either of his means or necessities. The question as to whether the construction which will be put upon certain sections of the law will be just and in conformity with the welfare of the people, however, is of vital interest and importance.

Particularly does this refer to that portion of the law relating to the taxation of so-called patent and proprietary medicines, as well as to those prepared by manufacturing chemists the containers of which bear a label specifying the virtues and dosage of the preparation. According to a natural interpretation of this clause every product issued by the manufacturing chemist, practically no matter what its composition or its value in the hands of the physician as a safeguard against disease, will be subject to a tax equal to that levied upon the worthless nostrums with which the country is so completely flooded at all times. There can be no doubt that such an interpretation by the Commissioner of Internal Revenue at Washington would be manifestly unjust, for those preparations which are confessedly designed only for dispensing through the medium of a physician's prescriptions should not be placed in the same category as those widely advertised in the daily press and sold to any applicant over the retail druggist's counter.

It has been argued that the tax is so small that it can be met by the manufacturer almost without inconvenience, and that his loyalty to his country should deter him from seeking to be made exempt from contributing his just share to that country's needs, but be this as it may, the poor as well as the rich must at times have recourse to the use of standard medicinal agents for the alleviation of human ills, and, viewing the matter in a practical every-day light, it is hardly to be supposed that the manufacturing chemist, any more than the brewer or the importer of table waters, in the end will be the one to defray the additional cost of putting his products on the market.

The opinion is very general that manufacturers of patent or proprietary medicines reap very large profits from the sale of their goods and there can be no doubt that it was the intention of Congress, in framing the act, to reach this class of articles rather than those put forth by the manufacturing chemist for use through the agency of the physician. The Internal Revenue Act of 1864 accomplished this purpose. The injustice of laying additional burdens upon the sick poor is so apparent that nothing but the clearest proof that such was the intention of Congress will justify those entrusted with the interpretation of the act in giving it such an effect.

The language of Schedule B of the Act reads as follows: "All medicinal preparations or compositions whatsoever made and sold or removed for sale by any person or persons whatever, wherein the person making or preparing the same has or claims to have any private formula, secret or occult art for the making or preparing of the same, or which are prepared, uttered, vended or exposed for sale under any letter patent *or trademark* or *which are prepared by any formula, published or unpublished*, or held out or recommended to the public by the makers, vendors or proprietors thereof as proprietary medicines *or medicinal proprietary articles or preparations*, or as remedies or specifics for any disease or diseases or affection whatever affecting the human or animal body."

The language used, particularly when read in the light of the caption of the schedule ("Medicinal Proprietary Articles and Preparations") can by no possibility be extended to cover anything except patented, trademarked, or proprietary articles.

Furthermore, the law reads: "The stamp tax provided for in Schedule B of this act shall apply to all medicinal articles compounded by any formula, published or unpublished, which are put up in style or manner similar to that of patent, trademarked, or proprietary medicine in general, or which are advertised on the package or otherwise as remedies or specifics for any ailment, or as having any special claim to merit, or to any peculiar advantage in mode of preparation, quality, use, or effect." This section is also adapted from the law of 1864, but it was never claimed that the provisions of the old act applied in any respect whatever to standard pharmaceutical drugs and preparations. In this adaptation on the part of Congress the word "proprietary" has been omitted, undoubtedly for the purpose of enlarging the scope of the section so as to include what is technically known as non-secret medicines, which are medicines of the same character and class as proprietary medicines, except that the formula is not concealed; but the language used, under any canons of construction, cannot be considered as going beyond that point. In order that standard pharmaceutical preparations should be considered within the scope of this section of the law, the preparations must be put up in a form adapted for the use of the consumer without the intervention of druggist or physician, and the claims made for it must be such as to induce the individual to resort to it to cure him of his ailments.

When he finally announces his decision it undoubtedly will be found that the Commissioner has drawn a line which overlaps on one side or the other the fine distinction so important in such a case, but if it leans in the direction which common humanity dictates, the interests of the manufacturing chemist not entering into the matter, no medicinal preparation designed to assist the reputable physician in his unceasing effort to subjugate disease will be made to add its quota to the National funds collected for the purpose of subjugating the Dons.

ECHOES AND NEWS.

Women Excluded from the Study of Medicine.—The German Medical Association, numbering more than 15,000 members, at its recent conference at Wiesbaden, unanimously adopted a resolution expressing disapproval of the admission of women to the study of medicine.

A Chair of Nursing Established in a Medical School —The

medical department of the University of Texas has taken the lead in officially recognizing the department of nursing in its curriculum. It is reported that Miss Hannah Kindbom has been elected Professor of Nursing at that institution. Professor Kindbom is twenty-six years of age, and a Swede by birth.

The Investigation of the New York Post-Graduate Hospital Concluded.—The special committee of the State Board of Charities appointed to investigate the charges of irregularity in the administration of affairs in the New York Post-Graduate Medical School and Hospital, reports that the charges which it had under consideration were not sustained by the evidence presented.

A Bale of Cotton for the Hospital Fund.—The first bale of cotton of the crop of 1898 has been sent to President McKinley by the citizens of New Orleans as a contribution to the United States Hospital Fund. It was sold at public auction at noon, on Wednesday of last week, from the steps of the Cotton Exchange Building at New York, and the proceeds deposited to the hospital account.

Prehistoric Surgical Instruments.—In a Roman hospital recently excavated at Baden, Switzerland, many medical utensils and surgical instruments were found, among them, probes, tubes, pincers, cauterizing instruments, safety-pins, bone medicine spoons, silver measuring vessels, jars and pots for medicine—some containing traces of ointment. Fourteen rooms of the building have been excavated.

Athletic Training of Soldiers.—The capture of blockhouses, after hard fighting with the Spaniards in the campaign before Santiago, has demonstrated the advantage of athletic training in all military organizations. A member of the 71st New York, in a recent letter home, announces that, "Had it not been that quite a number of us had had thorough athletic training, we could never have endured the terrific assault up those steep hills."

Firing on the Wounded.—The reports that the Spanish sharpshooters deliberately fired on the hospital flag, on the field of El Caney, seems hardly credible. It is true that two of a hospital party were killed, and it is stated that three wounded soldiers, while being carried in litters, were shot and killed. It must be remembered, however, that the lines of battle were very close, and that, with the long-range weapons in use at the present time, missiles seek out unintended victims.

Lady Salisbury Subjected to a Surgical Operation.—It is reported from London that the wife of the Prime Minister has long been afflicted with dropsy and recently submitted to a critical surgical operation for its relief. The cause of the dropsy, and the nature of the operation are not stated. Six doctors assisted at the procedure, including Sir William H. Broadbent, Physician in Ordinary to the Prince of Wales, and Dr. Charles Theodore Williams, Physician Extraordinary to the Queen.

The Requirements of Surgeons in the Volunteer Army.—Surgeon-General Sternberg has recommended, and Secretary Alger has approved, an arrangement by which physicians, appointed by the Governors of States to positions in the volunteer regiments, may be examined by a board of three physicians, appointed by the respective Governors. A certificate of this board—that the candidate has passed a successful physical and professional examination—will be accepted by the War Department as evidence of fitness.

Cubans Donate a Hospital at Key West.—In addition to the many testimonials of appreciation of the interference of the United States in their behalf, which the Cubans have given from time to time, they have recently contributed to the United States Government, a building for hospital purposes. The San Carlos theater and club-house at Key West has been formally ceded by the Cuban owners and stockholders to the Government as a hospital, although they placed no restrictions upon the uses to which the building shall be put.

Legislative Measures for an Increase of Population.—The example set by France in instituting measures for an increase of its population is being followed by Bulgaria. For every son born, beyond a minimum number, twenty francs will be paid, not only to the father, but also to the mother. A soldier who becomes the father of twelve sons will receive a pension large enough to support him, besides a decoration. The same reward will be accorded to his wife. It is gratifying to note that the wife's part in this duty to the State is meeting with adequate recognition.

The Fate of the Reconcentrados.—At the beginning of hostilities, the feature of the war, which appealed to the hearts of Americans was the relief of the Reconcentrados. Recent reports from Cuba seem to indicate that this factor has been almost completely eliminated. Nearly ninety per cent. of those who had been forced into the larger cities at the time of the Maine disaster have died of famine and exposure. In round numbers this includes nearly a million of women, children, and old men. The remaining few who, since the revocation of the order of concentration, have returned to the country, have been able to eke out a miserable existence by means of the wild fruits of the country.

Death under Chloroform.—A fatal accident from the use of chloroform recently occurred at the Infirmary in Edinburgh. The victim was a man who was being anesthetized for the purpose of reducing the dislocation of one of his finger-joints. The history of the case states that, after the first inhalations, the patient began to shout loudly, kick about, and fight, and it required the force of four or five doctors to hold him. This is the usual history of fatal cases, and teaches the importance of recognizing the fact that restlessness on the part of the patient is a protest against too concentrated anesthesia, and when force is resorted to and the anesthetic crowded, this unfortunate condition is aggravated to a fatal termination.

Restrictive Effects of War Taxes.—The New York statutes allow the employment of children between the

ages of twelve and fourteen at remunerative labor during school vacation. Children thus seeking employment are obliged first to secure a certificate from the Board of Health. Under the provisions of the War Revenue Bill, imposing a tax upon "certificates," each child procuring a certificate is obliged to pay a tax of 10 cents. The President of the New York Board of Health has written to the Attorney-General of the United States, calling attention to the fact that, under these conditions, hosts of poor children are deprived of their accustomed privileges. He asks for a ruling upon the particular section of the law which works these hardships, praying for its modification.

A Notorious Offender Convicted.—The difficulty of bringing to account the parasites of the profession who make their livelihood out of unholy and criminal practices, and who unblushingly vaunt their financial success in the face of the world, has been experienced in all communities. It was with satisfaction that we chronicled not long since the success of the New York County Medical Society in ridding New York City of its most persistent offender in this line. After a protracted trial, a notorious specimen of the genus above referred to and a great favorite among the "smart set" in London, has been found guilty, and condemned to seven years of penal servitude. *The* (London) *Times*, in commenting on the rottenness of society morals, says: "Soon after the offender's imprisonment a lady was asked what she and her friends would do now that his services were no longer available. 'Oh,' she replied, 'We have found another man.'"

The Social Position of an M. D. in England.—The medical press deplores the fact that in Great Britain the doctor is too often relegated to an inferior social rank and surroundings, not being admitted to the circle to which the parson, the local banker, the military officer, and the resident lawyer are welcome. This apparently accepted social inferiority of the general practitioner is attributed (1) to the bill-running system which prevails among them; (2) to the intimate association of medicine dispensing (for profit) with general medical practice. As a remedy for this state of affairs a cash system of payment is recommended, and the abolition of the practice of combining the medical and pharmaceutical functions. It is difficult for an American to understand how such simple prejudices should relegate a member of the learned profession to the social rank of trades people, and we are glad to know that the medical profession is gradually receiving in England the social recognition which it deserves.

The Rainfall in Cuba.—The Juragua Iron Company, through its Secretary and Treasurer, Mr. Josiah Monroe, has kept careful weather observations at Firmeza, the mining village of the company, which is located about sixteen miles east of the city of Santiago de Cuba and about five miles inland from the sea, among the mountains, about five hundred feet above sea level. In a recent communication to Surgeon-General Wyman of the Marine Hospital Service, Mr. Monroe gives a detailed tabular account of the temperature, the rainfall, sunshiny days, and cloudy days during the period of 1889-1897. From this we learn that in the year 1889 the rainfall was 76.75 inches; in 1890, 55.84 inches; in 1891, 60.14 inches; in 1892, 51.15; in 1893, 60.53 inches; in 1894, 56.24 inches; in 1895, 63.42 inches; in 1896, 58.22 inches, and in 1897, 90.57 inches. Bright, sunshiny weather is evidently the prevailing condition, the clear days each month throughout this series of years, varying from fourteen to thirty, with the large preponderance in favor of sunshine. The mean daily temperature is very even throughout the year, varying within the narrow limits of 76 to 84 degrees. The hottest period is the middle of the day. The nights are cool. The extent of the downpour when it does rain is illustrated by the fact that in one day, October 20, 1897, there was a rainfall of 14 inches.

CORRESPONDENCE.

OUR FOREIGN LETTER.

[From Our Special Correspondent.]

DIPHTHERIA ANTITOXIN STATISTICS ONCE MORE—SOME OPPOSITION MANIFESTING ITSELF TO SERUM-THERAPY—INOCULATIONS FOR RINDERPEST AND THEIR RESULTS—BACTERIOLOGY BEYOND THE DOMAIN OF THE MICROSCOPE—WANDERING AFRICANS AND PATHOLOGIC CURIOSITIES—FILARIA MEDINENSIS.

BERLIN, July 10, 1898.

A DISCUSSION as to the value of diphtheria serum in which Dr. Rassowitz, in the Vienna Medical Association, declared the value attributed to the antitoxin exaggerated, and supported his assertion by recent statistics, has attracted a good deal of attention in the German medical world. Rassowitz's article on the subject has just appeared in Liebreich's *Therapeutische Monatshefte*. As Liebreich, who is the Professor of Pharmacology at the University of Berlin, is known to be opposed to serum-therapy on principle, his opposition having given rise to a warm discussion between himself and Behring two years ago at the German Congress for Internal Medicine, the recent publication would seem to bear the stamp of quasi formal recognition by the school opposed to antitoxic treatment.

In the discussion at Vienna some things came up that are not included in this article. For instance, the reports of the early investigators of the diphtheria antitoxin were the subject of especially trenchant criticism. Just as soon as the serum treatment was introduced the most surprising and gratifying therapeutic effects were reported from it twenty-four to forty-eight hours after an injection. All symptoms had disappeared, the membrane had dropped off, the temperature had fallen, the child had regained its appetite, and a sense of well being replaced the lethargic prostration in many cases. It was these reports that led to the rapid introduction of the remedy.

Now that more is known of antitoxic values and the estimation of the value of serum in protective and curative units has become possible, these early results are open

to most damaging criticism. The number of antitoxic units employed at first was so small that they must have had practically no effect, and the good results reported at first were due entirely to what we now know to be only expectant treatment.

The statistics quoted by Rassowitz are those of St. Petersburg, on which he lays a good deal of stress, and of Trieste, of Basel, and of London. If statistics ever mean anything, perhaps they serve to show that antitoxin is not an infallible remedy for diphtheria when injected on the fifth day of the disease. As Professor Baginsky states in an article that will appear in the *Berliner Klinische Wochenschrift* within the next couple of weeks, there may be in local conditions in other cities, as there undoubtedly has been in London, some reason why antitoxic statistics should not be favorable. The want of official regulation of the antitoxic unit value of serum in England led to the putting on the market of a lot of serum of extremely low antitoxic value, as the *Lancet* examinations showed. The results attained in cases treated with this serum cannot reasonably be said to be the results of serum-therapy.

There is, perhaps, another thing that the unfavorable statistics serve to show, and that is that there are in all epidemics of diphtheria certain fulminant cases of the disease where toxin production is so rapid or its effect so serious that antitoxin does not seem to affect them. There would seem to be more of such cases occurring this year in Germany than for some years. While at Jena I heard Professor Krehl lament the failure of antitoxin in several cases, though it had been employed early in the disease. Here in Berlin there have been a number of such cases this spring.

The exaggerated claims made for the serum as to its effectiveness in *all* cases has undoubtedly led to a certain reaction of opinion, and one is a little surprised to find how many *doctors* have a certain sympathy with the opposition under these circumstances. "Not that we do not think serum-therapy of great benefit," as a prominent director of a large hospital said, "but that we do not think it the universal savior some too devoted adherents have been lauding it to be."

An article from Dr. Kolle, Koch's assistant in South Africa, in the last number of the *Deutsche Medicinische Wochenschrift*, gives the results so far of the forms of immunization introduced by Koch for protection against rinderpest. He says that it is the generally accepted opinion in South Africa that the original immunizing injections of bile introduced by Koch not long after his arrival in South Africa, saved the lives of 2,000,000 head of cattle, as the plague was raging furiously when he arrived. Immunity thus obtained, however, only lasts for from two to four months. It does not begin to protect for some time after the injections are begun, and besides is expensive, costing the lives of five out of every hundred cattle.

Though the bacterial cause of the disease remains unknown, an antitoxic serum has been found that furnishes lasting immunity, at least as far as observations go. It has been tried on 100,000 cases satisfactorily, and it has been found that sheep may be used to furnish the serum if inoculated five or six days before immunizing serum is desired with 50 to 100 cubic centimeters of virulent blood. In this way the dangers of conveying such diseases as Texas fever, anthrax, or tuberculosis, so common in cattle in South Africa, is avoided.

Though the smallest drop of an infected animal's blood conveys the infection, the microbic cause has not been found. Dr. Kolle thinks that the reason is that the microbe is too small to be seen with the present powers of the microscope. According to Abbe's researches, a microbe less than one-third the size of Pfeiffer's influenza bacillus would be invisible under the microscope. Kolle does not think that the bacterial cause of cattle plague can be much smaller than this, because, unlike Loeffler's experience with foot and mouth disease, the infectious material will not pass through a filter.

Three very interesting, exceedingly minute organisms are exciting the deepest interest of the world's greatest bacteriologists just now. At Paris Metchnikoff, Roux, and Nocard are studying what they think is the cause of pleuropneumonia in cattle, and it presents itself as a microbe so small that it is only discoverable because it produces clouding in culture media, and is seen under the microscope as minute points in the culture medium that strongly refract light and so become visible. Loeffler believes that the cause of foot and mouth disease is organic, despite its passage through a filter, for it has the quality of increasing itself after inoculation. Finally, what is this organism of cattle plague that has occupied Koch so? It would seem with this array of talent devoted to one subject the technic for ultra-microscopic bacteriology must be materially advanced in the near future.

Apropos of Koch's lecture on malaria and Texas fever, it is a little surprising to note the *British Medical Journal's* editorial on honor to whom it is due. The false impression that suggested the expression of editorial opinion was due to an incomplete report of what Koch said. As I reported at the time, his acknowledgment of the work done by Dr. Allen J. Smith, Professor of Pathology in the University of Texas, in Texas fever was most complete. He fully detailed Professor Smith's observations on the infectiveness of young ticks that had never been on infected cattle, and then described his own substantiation of them. A number of Americans who were present exchanged significant looks of compatriotic feeling. That the English workers on the mosquito theory of malaria were not mentioned by name is due, I suppose, to the fact that here in Germany the subject is not considered as yet to have gotten beyond the stage of merest theory.

The troupe of Toga negroes from the German colony in East Africa, which has been on exhibition at one of the cheap museums in Berlin, has furnished Berlin doctors with some rare opportunities for the study of unusual diseases. In the blood of some of them certain of the special tropical forms of the malarial parasite were found. A number of them developed smallpox, and gave the opportunity so rare here on the Continent of studying the appearance of the eruption on black skins, and now one of them has proved to have that rare parasite, the *filaria*

medinensis, or *dracunculus medinensis*. What looked like an ordinary leg ulcer refused to heal for some time, and at length a portion of a worm was noticed protruding from it. Each day 1½ to 3 centimeters more of the worm has come out, until now some 30 centimeters in all has been protruded. The Africans themselves take cold baths, which are thought to favor the exit of the worm once it starts to come out, and twist the amount of worm which appears each day on a small piece of stick to keep it from going back. This is the only treatment that is employed in this case, so that the thoroughgoing eclecticism of the Berlin school, even as regards the adoption of popular remedies, is evident. Every precaution is taken not to injure or rupture the worm, as that accident is often followed by serious infection of the parts. This infection is liable to invade the whole extent of the subcutaneous tissue in which the worm has its habitat, and as the worm may reach the length of even a meter (forty inches), serious cellulitis, that may require amputation, or may spread upward to the body and kill the patient, may occur. Another of the Africans is being treated for an ulcer near a malleolus that it is thought may prove to be also filarial in origin, the parasite just approaching the surface.

TRANSACTIONS OF FOREIGN SOCIETIES.

Paris.

WHEN SHOULD A KIDNEY BE REMOVED FOR HEMORRHAGE?—TORSION OF THE ENTIRE SMALL INTESTINE—CHOLEDOCHOTOMY WITH DRAINAGE BUT NO SUTURE—TREATMENT OF SIMPLE ULCER OF THE STOMACH—CARPUS CURVUS—SWELLING OF THE PAROTID GLANDS AFTER THE APPLICATION OF TINCTURE OF IODIN.

POUSSON spoke of a case of nephrectomy for renal hemorrhage before the the Surgical Society, June 1st. The patient was a woman, and the source of the bleeding having been determined by cystoscopic examination, the operator at first performed nephrotomy, but finding no cause for the hemorrhage, he therefore removed the kidney. There were several ecchymoses in its pelvis and different parts of the organ were congested and sclerotic, but there was no evidence of stone or tuberculosis. Six months later the patient was free from further hemorrhage.

POIRIER reported a similar case occurring in a man aged forty-eight years, whose kidney he had removed for hemorrhage, although nothing except a certain amount of chronic inflammation could be found in it. The patient recovered from the operation, but died some six weeks later from a pulmonary trouble. The speaker said that to his mind it was not clear that a kidney should be removed under such circumstances.

At the meeting of June 8th, POTHERAT strongly objected to a nephrectomy for so slight a cause. He treated for eighteen months for hematuria a woman whose right kidney was displaced, enlarged, and nodular, and clearly the source of the hemorrhages. Thinking that a neoplasm existed, although there was a small amount of albumin in the urine, he decided to removed the organ. It was both large and irregular, but when opened contained no calculus, nor was there any evidence of a neoplasm. For four days there was almost complete anuria, which was only temporarily relieved by the administration of theobromin, and the patient died some days later with uremic symptoms. The kidney which had been removed was simply hypertrophied as compensatory to the other one which was badly sclerosed. Another patient who had been troubled for three months with hemorrhage cystoscopically shown to come from the right ureter, had tenderness over the right kidney. Mindful of his previous unfortunate experience, Potherat decided not to remove the kidney until he had positive proof that it was abnormal. Attempts were therefore made to catheterize the ureter, but they failed in that the catheter could be passed only some millimeters beyond the orifice. From that time on the hemorrhages ceased, and had not recurred at the date of report, some two months later.

DELBET described torsion of the whole small intestine, an accident which is little known, but which he had twice observed. In the first instance the cause of the intestinal obstruction was not made out and an entero-anastomosis was performed. The patient died and at autopsy the real condition of affairs was made out. The mesentery was twisted in the direction of the hands of a watch. A second case occurring in a man aged sixty-seven years, was accurately diagnosed and the twist was unwound. Here too the twist was in the direction above mentioned. The result of operation was most favorable, and the following day the patient had a natural movement of the bowels. Unfortunately a bronchopneumonia followed the operation from which he died on the eleventh day.

QUENU recited two cases of choledochotomy, the first performed upon a woman aged fifty who in addition to her jaundice had advanced cardiac lesions, ascites, and a moderate glycosuria. The operation itself was rendered more difficult by the hypertrophy of the liver, and the extensive adhesions about the common duct, which made it impossible to do more than blindly divide the tissues at the tip of the finger. The stone was, however, removed without accident, but it would have been impossible to have sewed up the incision, even if this had been a step in the operation which Quenu deems inadvisable. The jaundice cleared up rapidly but the fistula did not close for two months. An attempt made with a probe to determine the patulous condition of the common duct, provoked so severe a hemorrhage that the operator thought that he had opened the portal vein. The cirrhosis of the liver and the cardiac complications persisted as the operation was performed too late to restore their integrity altogether. A second patient, also a woman, had been ill for more than three years with attacks of pain, fever, vomiting, etc., with continuous jaundice. Here too the adhesions were firm, the transverse colon, omentum, stomach, and duodenum being glued together and to the biliary passages in a way that defied dissection. The stone was at last exposed by a slow scratching process. It was large and pear-shaped, and might have been thought to lie in the gall-bladder, were it not that its point

was upward, and not downward as is the case in the pear-shaped calculi of the gall-bladder. In both of these cases the parts in the vicinity were so arranged after operation as to make a funnel from the opening in the common duct to the wound in the skin, and in this a drain was placed. In neither was there any peritonitis, although the bile was presumably septic.' The fistula in the second case closed in twenty days. These cases prove the success which attends the open treatment of the wound in the common duct. In both patients moreover the bile in the urine persisted after the jaundice had entirely disappeared, which fact led Quenu to the conclusion that there existed higher up in the biliary passages secondary obstructions of a minute character.

At the Therapeutic Society, May 25th, MATHIEU said that in the treatment of simple ulcer of the stomach preparations of iron, such as the perchlorid, and arsenic ought never to be given as they increase the hyperacidity and the interstitial gastritis, and so delay the cicatrization of the ulcer. The true treatment consists in the repose of the stomach, as complete as possible, which is best secured by rectal alimentation. The use of the sound either for the introduction of bismuth or other remedies, or for the sake of testing the contents of the stomach, is a dangerous practice, as it may bring on an alarming hemorrhage. The use of alkalies to counteract the acidity of the organ has been highly spoken of, but they act by increasing the motor activity of the stomach, and so their use may be attended with danger. Surgical measures are a hopeless risk, as in nearly every case it is impossible to find the point of the hemorrhage.

At the Academy of Medicine DELBET described *carpus curvus*, an affection about which there is very little general knowledge. The hand in this trouble while preserving its normal form is displaced forward as if a luxation of the carpus existed. The plane of the posterior surface of the forearm, if continued downward, would pass quite behind the carpus and metacarpus. The plane of the anterior surface of the forearm, on the contrary, would cut the carpus and leave most of the hand anterior to it. The hand is also displaced toward the ulnar side, so that the axis of the forearm instead of falling through the head of the third metacarpal, falls nearly or quite through that of the second. Dissection of this deformity shows that it is due to a curving of the radius, with a secondary luxation at the ulnocarpal joint, a true deformity of growth, similar to that seen in genu valgum. If the case is sufficiently severe to require operation, a good result may be obtained by an accurate division of the radius.

At the Medical Society of the Hospitals, June 3d, RENON described a double parotiditis which followed the application of the tincture of iodin. The patient was a man, aged fifty-one years, whose chest had been painted with iodin for a cough. The following day the skin of the chest was edematous and painful, and the same day the right parotid gland swelled, the other one being affected in like manner the succeeding day. In the opinion of the writer the unhealthy state of the buccal mucous membrane aided in the swelling of the glands. The swelling subsided in a few days.

LE GENDRE had noticed that the extensive application of the tincture of iodin upon rheumatic joints is sometimes followed by a tenderness of the parotid glands.

MUCOUS MEMBRANE ERUPTION IN MEASLES.

To the Editor of the MEDICAL NEWS.

DEAR SIR: In your issue of the 25th ult., page 818, I note with some surprise that an eruption upon the mucous surfaces of the mouth in the earlier stages of measles is regarded as a new diagnostic sign, for the discovery of which, it is said, we are indebted to Koplik of New York.

For more than fifteen years I have noticed that the buccal and faucial mucous membrane usually presents the papular eruption incident to measles from twenty-four to forty-eight hours prior to the development of the cutaneous eruption. In cases of suspected measles I have always inspected the mouth and pharynx in search of the mucous papules and in many instances I have, by their presence, been enabled to diagnosticate the disease some hours in advance of the appearance of the skin eruption. This eruption is an almost constant precursor of the cutaneous eruption and is fully as reliable a sign as the latter. I have noticed these "spots" most often upon the soft palate. I do not regard the eruption as a new sign of measles for I believe that many physicians have made use of it as an early aid to diagnosis. I recall instances where "old grannies" have made use of this "new sign," and it may be that the honor of its discovery belongs to them. Certainly the honor belongs not to any one of the present generation of medical practitioners.

Respectfully,

A. L. HALL, M.D.

FAIR HAVEN, N. Y., July 11, 1898.

SOCIETY PROCEEDINGS.

ILLINOIS STATE MEDICAL SOCIETY.

Forty-Eighth Annual Meeting, Held at Galesburg, Ill., May 17, 18, and 19, 1898.

THE Society met in the Court House, under the presidency of DR. J. M. G. Carter of Waukegan. An address of welcome, delivered by the HON. F. F. COOK, was responded to by the President.

SECTION ON PRACTICE OF MEDICINE.

DR. ARTHUR R. EDWARDS of Chicago in the Chair.

The first paper read in this section was by DR. FRANK P. NORBURY of Jacksonville, entitled

MALNUTRITION IN INFANTS.

The author said that nearly all cases of malnutrition are the result of gastro-intestinal disorders incidental to errors of diet. Over-education of the mother is responsible for her lack of ability to supply wholesome milk to the infant. Again, other conditions, such as excitement, worry, neurasthenia, the occurrence of menstruation, etc., may produce unfavorable results upon the milk,

and thus disturb its nutritive value. Artificial feeding is responsible in many cases for indigestion in infants. This is the result of faulty methods of administration of foods and of the promiscuous and heterogeneous selection of food-stuffs prescribed by the neighbor or parent. The treatment has two main objects in view, namely, to arrest wasting, and to repair the damage done by the disease.

INFANTILE SCURVY, WITH REPORT OF CASES,

was read by DR. ISAAC A. ABT of Chicago. He said the earliest cases reported were erroneously described as cases of acute rachitis. We were indebted to Cheadle of London, who described the disease in detail as infantile scurvy in 1878, and later as osteal or periosteal cachexia with scurvy. The essayist related cases that had come under his observation to illustrate the course of the disease. He discussed both the etiology and symptomatology at length.

The diagnosis in well-marked cases is not difficult. With reference to the differential diagnosis, congenital syphilis can be excluded by the history of the case, and by the absence of syphilitic lesions on the skin and mucous membranes. In congenital syphilis there is never a history of severe pain. The pseudoparalyses of syphilis are limited nearly always to the upper extremities; the swelling is never so intense as in cases of infantile scurvy, and is more prone to occur on the epiphyses than on the diaphyses. Separation of the epiphyses occurs in both diseases. A spinal paralysis may be thought of, although in such cases there is neither tenderness nor swelling. As to the treatment, brilliant results are obtained by providing a suitable diet, such as fresh cow's milk, or mother's milk, beef juice, orange or lemon juice, fresh vegetables, mashed potatoes, etc. The child should be placed under the best possible hygienic conditions; good ventilation should be provided for, and under favorable conditions of weather the child should be out of doors. Cod-liver oil by mouth or inunction is especially indicated when the child recovers from the scorbutic condition in order to aid nutrition.

DR. FRANK S. CHURCHILL of Chicago followed with a paper on

MODIFIED MILK.

He discussed the laboratory method and home modifications of milk.

THE DIAGNOSIS OF PLEURISY WITH EFFUSION, WITH ESPECIAL REFERENCE TO MISLEADING PHYSICAL SIGNS,

was the title of a paper by DR. JAMES B. HERRICK of Chicago. He first spoke of the importance of careful inquiry into the history of the patient, and dwelt upon the fact that in some instances there may be an absence of pain and cough, the clinical symptoms resembling those of mild typhoid fever. In other cases the severity of the symptoms and the explosive onset will remind one of pneumonia. Among the signs which may mislead, he mentioned the occasional inspiratory recession of interspaces and the decubitus upon the sound side. He regarded vocal fremitus as of relatively inferior value because of the many conditions which may cause it to be retained even though there is a large amount of fluid present. With small amounts of fluid a careful examination should be made in the posterior axillary line just external to the angle of the scapula, for signs are often present here though absent elsewhere. Even with quite large effusions there is a triangular area of relative dulness above the line of flatness posteriorly. Quite pronounced bronchial breathing and well transmitted voice sounds can frequently be heard at this point.

The crucial test is exploratory puncture. With careful asepsis and a knowledge of the anatomy of the thoracic viscera there is practically no danger in this procedure. Negative results should not lead to the exclusion of pleurisy with effusion until circumscribed collections of fluid have been ruled out. By means of exploratory puncture, bacteriologic and microscopic examination of fluid is made possible, throwing much light upon the etiology, prognosis, and treatment. Palpatory puncture, to use Rosenbach's expression, may be of great value in the diagnosis of an underlying tumor, and may be the only means of determining the presence of the thick fibrous plates which sometimes line the chest.

A paper, entitled

THE SIGNIFICANCE OF CERTAIN SIGNS AND SYMPTOMS IN HEART INSUFFICIENCY,

was read by DR. B. W. SIPPY of Chicago, and was followed by one on

THE SMEGMA BACILLUS

by DR. J. L. MILLER of Chicago. The following deductions were drawn: First, over the entire surface of the body and exposed mucous membrane, and especially on the genitals, bacilli are found which resemble morphologically and in tinctorial qualities the bacillus of tuberculosis. Second, from the external genitalia they frequently gain access to the urine, especially in women, and may be a source of error in the examination of urine for tubercle bacilli. Third, the smegma bacillus presents wide variations in size and form, thus rendering morphologic differentiation frequently impossible. Fourth, while most smegma bacilli are more readily decolorized by any of the solutions commonly employed, occasionally they possess equal or even greater resistance than the bacillus of tuberculosis. Fifth, methods of decolorization, where acids alone are employed, are fallacious; acid-alcohol or dilute alcohols, unless long continued, are equally unreliable. Better, but not free from error, is the use of absolute alcohol for at least five minutes. In ammoniacal urine, however, such prolonged use of alcohol may also remove the stain from the tubercle bacillus. Sixth, attempts to remove the fat or fatty acids from the bacilli by ether, chloroform, or other solvents, fail to furnish us with a means of differentiation. Seventh, we must rely on means of excluding the smegma bacillus from the urine. It has never been demonstrated in the bladder, and apparently seldom involves the deep urethra; therefore, by cleansing the external meatus and withdrawing the urine with a catheter we can exclude this possible source of error.

REMARKS ON THE TREATMENT OF NEURASTHENIA

was the title of a paper by DR. HUGH T. PATRICK of Chicago. He said that for the production of neurasthenia, as for the production of nearly all disease, two conditions are essential: First, a noxious agent, and, second, a relative vulnerability of the organism or of some part of it. The ratio of these two etiologic factors may be called the etiologic index. In some cases the first effect, that is, the extraneous agent, will be very prominent, the organism itself being considered as normal. In others, the exciting agent will be exceedingly slight, the inherent susceptibility or instability of the patient being an essential causal condition. Each of these two classes of neurasthenia will naturally need radically different treatment. In the first, those in which the patient once possessed of a normal nervous system which has simply been overstrained and overdrained, the important features of treatment are rest and recuperation. In the second class of cases, those in which an unstable nervous system of the individual is at fault, the treatment is essentially mental, and the best way of administering it is by systematic education. For such patients isolation and an initial period of rest may be very useful, but for the further treatment gradually increasing physical exercise and mental occupation are necessary.

DR. GEORGE W. COX of Chicago followed with a paper on

STREPTOCOCCAL INFECTION,

in which he briefly discussed the subjects of puerperal septicemia, erysipelas, phlegmon, diphtheria, scarlatina, and tuberculosis, and reported several cases of streptococcic infection, which he said can be easily detected and cured if the proper means are employed at the proper time. A microscopic examination will confirm the diagnosis and Marmorek's serum will effect a cure.

DR. GEORGE W. JOHNSON of Chicago contributed a paper, entitled

OBSERVATIONS ON THE BLOOD OF TUBERCULAR PATIENTS.

These observations were made on patients in the advanced stage of the disease, with cavities, and, at times, hemoptysis. As to the cause of the apparent anemia in tubercular patients, Cabot and others have discovered that it is not due to a reduction in the hemoglobin. The same authorities state that in uncomplicated tuberculosis the number of red corpuscles remains practically normal. Dr. Johnson paid especial attention to the patient's physical condition as to cavities and hemoptysis. The observations were made before meals, and no attacks of hemoptysis occurred between the first and second examinations. The patients were up and out of doors most of the time during the day. The microscope was used to compute the blood count. Of thirty-three patients examined all had cavities of various sizes, and all had had hemorrhages or hemoptysis. Of these thirty-three patients twenty-five were found to have leucocytosis, that is, the white cells ranged above 7500 per centimeter. These twenty-five also showed cavities. Cabot and others state that there is always a leucocytosis when there are cavities and after hemorrhages. Nine of the thirty-three showed a red-blood count of 5,000,000 or more, which Cabot states as a normal basis. The remaining twenty-four showed a red-cell count in many instances far below 5,000,000, and in no case was the hemoglobin up to normal. In only one case did it reach seventy-five per cent.

Having made observations to determine the character of the blood, he also made some therapeutic observations, using 5-per-cent. nucleinic acid, No. 2, in the first 10 cases; 5-per-cent. nucleinic acid, No. 1, in the second 10 cases; ferratin in 6 cases, and heminol in 5 cases. The first 10 patients were given 22 cubic centimeters every four hours for twenty-four hours. The second blood observation in the first 10 patients showed 6 out of the 10 to have a still greater leucocytosis. The red-blood count was practically unchanged. The hemoglobin showed an increase of from 3 to 10 per cent. in those instances in which there was a leucocytosis. The second 10 were put on the nucleinic solution, No. 1, which was chemically pure and for hypodermic use. Thirty minims were given hypodermically every four hours for twenty-four hours. The second count in these showed the same condition as in the first 10, who were given No. 2 solution by the mouth. None of the patients complained of any bad effects, but experienced a sense of renewed energy, the circulation being better and the appetite improved. He had noticed repeatedly the splendid stimulating effect of nucleinic acid in every case in which he had used it.

Five patients were put upon heminol, 15-grain doses being given every four hours for thirty-six hours. A second examination of the blood of these patients showed an increase of the red cells in four cases. Three showed an increase in the number of white cells, and only two showed an increase in the percentage of hemoglobin. The blood of the thirty-three patients was stained and studied, and in but two cases was there found a poikilocytosis.

CHELIDONIUM MAJUS IN INOPERABLE CARCINOMA,

was the title of a paper by DR. C. C. HUNT of Dixon. He had employed this remedy in three cases and concluded that (1) chelidonium majus, injected interstitially into the substance of a carcinomatous growth, tends to its obliteration and necrobiosis. (2) Copious and frequent interstitial injections of the fluid extract are unattended by danger to the patient, if judiciously used. (3) In cancer of the rectum, even at an advanced stage, stenosis may be prevented and the necessity of palliative colotomy obviated. (4) It is a deodorizer. (5) There is some warrant for the belief that it has a favorable influence over glandular infiltration and tends to prevent metastasis. (6) It is hemostatic and antiseptic. (7) It gives the patient hope of ultimate recovery, and this tends to mitigate or annul the awful apprehensions of impending dissolution. (8) More comprehensive and exact experiments are necessary in order to determine the real value of the drug.

The presidential address was delivered by DR. J. M. G. CARTER of Waukegan, who selected for his subject

ADVANCES IN THE DOMAIN OF PREVENTIVE MEDICINE.

The chief object of the address was to show that a responsibility, almost an emergency, exists in the field of preventive medicine, and that this responsibility rests upon the State. He outlined what seemed to him to be a partial possible solution of the problem and presented the following propositions as expressing his ideas of what is necessary: (1) The State or municipality should give men who cannot secure other work some kind of employment which will afford them a living. (2) This may be done by introducing such public improvements as will add to the comfort of the people or otherwise benefit them or enhance the value of property. (3) A minimum rate of wages should be paid so that only those who cannot find work elsewhere will seek such employment. (4) All able-bodied men without work, who have no visible means of support and who do not apply for such government employment, should be subject to draft for this labor. (5) The unfortunate and disabled poor should be cared for as wards of the State. (6) The State should see that the poor are properly or comfortably domiciled in houses provided with good ventilation, supplied with good water, and sufficiently warm. (7) Inspection of the homes of all the people should be conducted regularly and thoroughly, the object being to see that they are in good sanitary condition. (8) All foods put upon the market, as meats, vegetables, fruits, dairy products, milk, and manufactured products should be inspected as to their source, composition, and present condition. (9) Public baths should be established where the poor can have facilities for bathing free, or at a nominal cost. (10) These provisions should be enforced under conditions which will not interfere with the freedom of a liberty-loving people.

DR. J. W. PETTIT of Ottawa then delivered an address, choosing for his subject,

STATE CONTROL IN MEDICINE.

He detailed interestingly the progress of legislation in favor of stricter requirements for the licensing of medical students. The old diploma law in Illinois was instanced. He referred to the movement for the passage of a bill raising the requirements for the practice of medicine. This agitation would eventually lead to the wiping out of sectional lines among medical systems.

In the absence of Dr. Nicholas Senn of Chicago, who was to have delivered the address on surgery, entitled "The Surgical Treatment of Intestinal Tuberculosis," DR. JOHN H. FINLEY, President of Knox College, was introduced and spoke on

INTELLECTUAL BACTERIOLOGY.

He referred humorously to various kinds of germs, such as the micrococcus egotisticus, a germ which impells one to look out for himself and get everything he can. The wool-gathering microbe often afflicts students and brings about in them a revulsion to thoughts of labor. Another microbe is the bacillus bombasticus, and still another the micrococcus oratoricus, found frequently in Knox College. The spirillum Americanus abounds largely in the blood of such men as Admiral Dewey.

SECTION ON ETIOLOGY, STATE MEDICINE AND MEDICAL JURISPRUDENCE.

DR. DANIEL R. BROWER of Chicago in the Chair.

The first paper read in this Section was by DR. GEO. N. KREIDER of Springfield who stated that no law passed by the State Legislature will succeed in driving out the quacks who are practising in this State. He offered some suggestions regarding the position of the Board of Examiners, the fees to be charged, and the penalties to be imposed for violation of the statutes, if passed.

DR. HAROLD N. MOYER of Chicago followed with remarks on

WHAT SHOULD BE THE LAW IN THE STATE OF ILLINOIS?

He said that a new restrictive law is particularly needed because a great number of quacks are practising in the State under the protection of the present State license. He sanctioned the clause in the proposed new bill providing that each licensed physician shall register his name with the State every year.

DR. L. N. RYAN of Galesburg spoke of the advantages of separating the State Board of Health from the Examining and Licensing Board. The duties of the State Board of Health have become so arduous that it can not attend to the additional duties of an examining and licensing board.

DR. J. O. DECOURCY of St. Libory gave a summary of the laws governing expert testimony in other States and countries.

DR. SANGER BROWN of Chicago pointed out the defects of laws governing expert testimony in Illinois, and said that under the present law an expert is usually allowed a fair opportunity to express his views in the case on trial, and, if honest and competent, he need have no fear of cross-examination; but if dishonest and incompetent he is likely to fare badly and to cast discredit upon the profession.

DR. FRANK P. NORBURY of Jacksonville spoke on the same subject, and said there are three essential elements in connection with expert testimony: First, what is the own value of the expert, meaning his ability and honesty? Second, what are the established facts in the case upon which he bases his opinion? Third, what have been his opportunities for examination of these facts? Upon such a basis the courts recognize the value of expert testimony, and, in the general questions of science and skill are disposed to give just weight and consideration to an expert opinion when expressed.

DR. D. W. GRAHAM of Chicago read a paper in which he offered sugestions for outlines of a law regulating expert testimony. He said that in the minds of those desiring legislation on this subject there are two distinct things to be accomplished; one pertains to compensation of the expert witness, and the other looks toward some method of securing impartial testimony of such character as will command the confidence of all concerned.

DR. DENSLOW LEWIS of Chicago related his personal experience with the Dixon decision. He referred to its salient points as well as to the arguments of counsel and

the factors which apparently influenced the Appellate and Supreme Courts in arriving at the decision in this case.

DR. J. A. EGAN of Springfield talked on the subject of legislation necessary to promote better sanitation throughout the State.

The Society voted its unanimous approval of the new Medical Practice Bill to be presented at the next meeting of the State Legislature.

SECTION ON SURGERY, SURGICAL SPECIALTIES, AND OBSTETRICS.

DR. J. L. WIGGINS of East St. Louis in the Chair.

DR. HENRY F. LEWIS of Chicago read a paper on

UREMIA IN THE PROCESS OF CHILD-BEARING.

Uremia was defined as a condition of the system resulting from the retention in the blood of toxic products which should normally be eliminated chiefly in the urine. Eclampsia is a frequent sequel of uremic phenomena occurring in the course of the child-bearing process. The author in discussing the subject included the eclampsias, neuroses, psychoses, and other symptoms due to the toxemia accompanying or following pregnancy. He also included the albuminuria of pregnancy.

DR. FRANKLIN H. MARTIN of Chicago followed with a paper on

THE OPERATIVE TREATMENT OF CARCINOMA UTERI.

The following is a summary of the paper: (1) A microscopic examination of the tissue of the three portions of the uterus should be made whenever one of the well-known classical symptoms of carcinoma appears. (2) Carcinoma of the vaginal portion of the cervix should be treated by vaginal hysterectomy, including the upper portion of the vagina and as much of the base of the broad ligament as it is possible to include, with the ureters pushed well to the side of the pelvis. (3) Carcinoma of the body of the cervix should be treated by vagino-abdominal hysterectomy, with thorough removal of the broad ligament and the deep iliac glands. (4) Carcinoma of the body of the uterus should be treated by thorough removal of the uterus by vagina or abdomen so as to include the tubes and ovaries. The iliac glands should be removed if involved. (5) Neglected carcinoma should never be abandoned, but should be symptomatically relieved by curettement and cauterization, if the more radical procedure no longer seems practicable, with the possible hope of permanent relief in a small percentage of cases.

CONSERVATION OF TISSUE AND FUNCTION IN PELVIC SURGERY.

The author of this contribution was DR. HENRY P. NEWMAN of Chicago. The object of the paper was to stimulate investigation along the line of greater conservatism of the genital health of women. This may be aided (1) by a deeper study of the problems of cell nutrition and general metabolism, in order to determine the relative value of glandular and other structures, and the relation of the pelvic organs to the great systemic laws. (2) By seeking the habits of regimen of individual patients as to diet, dress, social and educational life, etc., for the causes of disease, remembering that these, if allowed to go uncorrected, may handicap the best efforts of medical science and effectually undo all that may be accomplished. (3) By giving to every definitely diseased structure the best opportunity to recover its function that science can devise, by prophylactic supervision of life and habits, by palliative treatment when it offers relief, and by prompt resort to surgical interference when it is called for in the interests of true conservatism.

DR. WELLER VAN HOOK of Chicago described a new device for facilitating operations about the anus. Starting from the proposition that existing technical methods fail to provide means of aseptic or even approximately aseptic operating, especially in view of Cohn's demonstration of the penetrability of fresh cautery-eschars by pathogenic micro-organisms, he reasoned that we should seek means of operating upon hemorrhoids and other anal lesions by dissection and suture. The device consists of a one-half inch rubber drainage-tube perforated near one end and drawn through a minute opening in a piece of medium-weight dentists' rubber dam tissue twelve inches square. It is essential to success that the bowels be prepared beforehand. The method recommended is (1) laxatives to thoroughly evacuate the bowels, on one occasion only, four or five days before the operation. (2) Daily colonic flushings thereafter. (3) After the laxatives have acted, one or two drams of bismuth subnitrate daily in divided doses to keep the colon empty. In operating on hemorrhoids, the following technic is employed: The sphincters are stretched, the rectum irrigated, and the tube with its covering introduced by means of an eight-inch forceps. To keep the umbrella-like device from slipping out, and to keep the dam in contact with the rectal wall, some strips of gauze are pushed up into it, between the tube and the dam. The dam is then pushed aside, the tissues washed again with antiseptics and the hemorrhoids excised and the wound sutured. A piece of iodoform gauze saturated with compound tincture of benzoin is then inserted between the dam and the anal wall. The apparatus and dressing are left undisturbed for four or five days.

A paper, entitled

THE TREATMENT OF ACUTE ABSCESS AND GANGRENE OF THE LUNG,

was read by DR. A. E. HALSTEAD of Chicago. He said that it is only within the last few years that well-known surgical principles have been applied to intrathoracic suppurative conditions. The term abscess of the lung was employed in the paper to designate only acute suppurative inflammation, non-gangrenous, which has its seat within the lung tissue; therefore, cavities filled with pus, formed either by a dilated bronchial tube or by destruction of lung tissue from tubercular infection, were not considered. The causes of acute abscess of the lung were dwelt upon, the principal one being lobar pneumonia. The surgical treatment of lung abscess comprehended puncture of the abscess, aspiration, incision of the lung, and drainage. The author dwelt at length upon the

technic of pneumotomy for abscess or gangrene of the lung.

DR. JACOB FRANK of Chicago read an instructive paper, entitled

PATHOLOGICAL HISTOLOGY OF INTESTINAL UNION AFTER THE USE OF THE FRANK BONE-COUPLER.

From a microscopic study of the healing of intestinal wounds after the use of various suture methods and mechanical devices, he had arrived at the following conclusions: (1) That no suture method insures an exact coaptation of the various layers. The Czerny-Lembert suture, considered one of the best of the many suture methods, does not insure a perfect line of apposition. In a specimen three weeks after operation, in which this suture had been used, there was a marked turning-in of the ends of the bowel. The mucosa in the specimen had not yet regenerated. (2) In regard to the invagination-suture method, he referred briefly to but one, namely, that of Harris, which he said would stand as a type for others. Union takes place, but the different layers are not in juxtaposition, and the lumen of the bowel is greatly encroached upon. (3) That all suture methods leave the subsequent lumen of the bowel more stenosed than either the Murphy button or the author's coupler.

A PLEA FOR EARLY OPERATION FOR LACERATIONS OF THE CERVIX UTERI.

DR. JOSEPH B. BACON of Chicago read a paper on this subject. After referring to the Emmet and Schrader operations for the repair of the cervix, Dr. Bacon described a new adaptation of pathologic facts, as recognized in the disease affecting non-striped muscles and fibrous tissues in other organs, and showed how like conditions may help to cause some of the serious results found in neglected cases of severe lacerations of the cervix. He claimed that the destructive changes found in both the fibrous and muscular tissue of the cervix, and later in the body of the uterus, are due to the persistent chronic inflammation, and that these changes can be avoided by an early operation, but if neglected, there is no limit to the destruction, and in time no operative procedure will more than relieve a part of the symptoms, and cannot remove the diseased tissue and cure the woman. He claimed that the same pathologic laws that explain cicatricial strictures of the rectum, as advocated by Harrison Cripps, apply equally well to the cicatricial changes that are found in the cervix uteri, because there is a like anatomic make-up of the muscles, glands, and excessive fibrous tissue normally present in both. First, the tendency of fibrous tissue, subjected to chronic inflammation, to become both hypertrophied and contracted, and second, the tendency of muscular fibers, when subjected to undue and persistent nerve irritation, to undergo fibroid degeneration with permanent atrophic contraction of its fibrous elements.

The following officers were elected for the ensuing year: President, T. J. Pitner of Jacksonville; first vice-president, Harold N. Moyer of Chicago; second vice-president, J. T. McAnally of Carbondale; permanent secretary, Edmund W. Weis of Ottawa; assistant secretary, W. F. Grinstead of Cairo; treasurer, George N. Kreider of Springfield. Place of meeting, Cairo; time, third Tuesday in May, 1899.

REVIEWS.

A SYSTEM OF MEDICINE BY MANY WRITERS. Edited by THOMAS CLIFFORD ALLBUTT, M.A., M.D., LL.D., Regius Professor of Physics in the University of Cambridge. Vol. V. New York: The Macmillan Co.

THIS volume begins with the discussion of the diseases of the liver, including under this category Weil's disease. Particularly excellent is the chapter on jaundice which, though founded on Frerich's old classification seemingly, is much more modern and inclusive. The attacks of gallstone colic without the presence of icterus are clearly presented and the other diseases of the hepatic organ are considered in full. We scarcely can commend the addition of icterus neonatorum to diseases of the liver, but perhaps this condition is as well considered here as under any other caption. The pancreatic diseases are next taken up by Dr. Reginald H. Fitz, the only American contributor to the volume except Dr. Henri A. Lefleur of Montreal, who has contributed an article on "Amebic Abscess of the Liver."

The diseases of the kidneys are next described, beginning with general pathological considerations of the renal functions. Nephroptosis, in which the distinction between floating and movable kidney is strictly defined, and the albuminuric renal diseases follow. The surgical diseases of the kidney are next considered, together with an admirable little chapter on the differential diagnosis of renal tumors.

One will read the chapters on the diseases of the lymphatic and ductless glands with especial interest, not only because of its inherent excellence, but because its authors' names are familiar in this domain of medicine—Drs. Ord, Mackenzie, Rolleston, and Murray. Scrofula is discussed by Professor Allbutt, and its surgical aspect by Mr. Pridgin Teale. We note only that the *habitus lymphaticus* of Paltauf is not mentioned. "Obesity" and its treatment are next taken up in an admirable manner by Sir Dyce Duckworth.

There is nothing better in the whole system than Dr. A. Ransonie's "General Pathology of Respiratory Diseases." It is a treatise in itself and is made so clear that, although this is not a work for students, it would well repay them to read this short monograph. It is well supplemented by Dr. Mackenzie's article on the physical signs of diseases of the lungs and heart. The graphic charts given with it elucidate the text exceptionally clearly. The volume closes with three chapters devoted to the diseases of the nose, the pharynx, and the larynx respectively.

One cannot fail to be impressed in the reading of this volume with the philosophical treatment of the subjects, quite in keeping with the tone of those which have gone before. The conception of this system of medicine is unique and emphasizes in no uncertain way the fact that the modern physician must be a thinking man if he would be a

physician at all. The scientific tone, the logical presentation of facts, the admirable arrangement and, above all, the authority of the various articles is bound to make this system a classic among books of its kind.

APPLIED BACTERIOLOGY. An Introductory Handbook for the Use of Students, Medical Officers of Health, Analysts, and Sanitarians; 464 pages and nine plates. By T. H. PEARMAIN and C. G. MOOR, M.A. Second edition. London: Baillière, Tindall & Cox, 1898.

THIS handbook of bacteriology is a very commendable one. The purpose is to give an account of the principal facts of bacteriology which may have practical application. After a brief history of bacteria and reference to their origin, growth, and destiny, the authors devote about 100 pages to a description of bacteriologic apparatus, methods of bacteriologic study, methods of spread of disease, immunity, and sero-therapy. The discussions of individual organisms include that of tuberculosis, leprosy, anthrax, typhoid, diphtheria, cholera, erysipelas, gonorrhea, glanders, syphilis, influenza tetanus, malignant edema, bubonic plague, pneumonia, relapsing fever, scarlet fever, smallpox and vaccinia, hydrophobia, malaria, actinomycosis, yellow fever, cholera nostras, infantile diarrhea, and the pyogenic organisms. By way of criticism, it may be said that scientists do not admit that the organisms which are attributed as causative of some of these diseases, are so in reality, and it would seem that the authors have not always been as critical as they are warranted in being by fact. For instance, they state positively that the organism causing influenza is that described by Pfeiffer, but such a bold statement does not carry conviction. The writers' inclinations toward the eager acceptance of the claims of bacteriology are further seen in their statements that "Lustgarten's bacillus is probably the specific organism of syphilis; a streptococcus described by Klein in 1882 is probably the cause of scarlet fever."

There are chapters on disinfection and disinfectants, on fermentation, and on the bacteriologic examination of water, milk, filters, etc., and the volume closes with a discussion of the characters of some commonly occurring organisms not fully described in previous pages. The book may be recommended as a fairly accurate reflection of the status of bacteriology at the present time. It will appeal to the general medical reader, to the dilettante in science, and to those engaged in pursuits allied to medicine rather than to the advanced medical student.

A MANUAL OF GENERAL PATHOLOGY FOR STUDENTS AND PRACTITIONERS. By WALTER SYDNEY LAZARUS-BARLOW; 795 pages; $5, net. Philadelphia: P. Blakiston, Son & Co., 1898.

THIS is one of the important books of the year. Not that it contains much that is new, but the writer's point of view is in many instances so individualized and so well presented that old facts are laden with greater suggestiveness. During the past few years a large number of most commendable treatises on pathologic anatomy have appeared, but there has been a dearth of works on general pathology. The vegetable micro-organisms, with especial reference to the bacteria, are discussed before the pathology of the circulation and the blood and the pathology and sequels of inflammation are taken up, while the pathology of infection follows these chapters. This is an arrangement which commends itself to the reader. So much cannot be said for the arrangement and sequence of some of the other chapters. For instance, the pathology of nutrition is sandwiched between the pathology of shock and collapse and the pathology of respiration, when it should follow the chapters on inflammation.

The author's pages give much evidence that he has a comprehensive grasp of the subject, and that he has a logical, temperate mind. The book is one that will be read by the student because its context should be as familiar to him as the truths of physiology, and by the physician because he will find it not only interesting but enlightening. We regret to say that the printing, paper, and binding are all inferior, as is the case with so many of the books printed in Great Britain and sent to this country to be published.

ATLAS AND ESSENTIALS OF PATHOLOGICAL ANATOMY. By DR. O. BOLLINGER. Vol. I. Circulatory, Respiratory, and Digestive Apparatus. New York: Wm. Wood & Co. (Wood's Medical Hand Atlases.)

THIS excellent little volume admirably fulfils its purpose. The sixty colored plates are alone worth the price of the book. The text shows many barbarisms of construction and diction which might easily have been obviated by submitting the translation to a competent medical reader. The book is well bound and satisfactorily printed on good paper.

THERAPEUTIC HINTS.

For Renal Colic.—

Morphin hydrochlorat. . . .	gr. iv
Atropin sulphat.	gr. $\frac{1}{10}$
Ag. laurocerasi	ʒ vi.

M. Sig. One teaspoonful as initial dose, cautiously increased or repeated if indicated.

For Phosphorus Poisoning.—

℞	Ol. terebinthin.	ʒ iiss
	Syr. aurantii cort.	℥ iiss
	Mucilag. acaciæ	℥ iii.

M. Sig. To be taken in three portions, each time well shaken.—*Vetter.*

For Coryza.—Gaudin asserts that the most intense coryza can be arrested, especially in the initial stage, by inhalation through the nostrils of the vapor of formic aldehyd in forty-per-cent. solution. This treatment also helps to diminish the fetidity in ozena.

For Acne Vulgaris.—

℞	Sulphur præcipitat. . . .	gr. lxxv
	Zinci sulphat.	gr. xlv
	Potassii sulphat. } aa . .	ʒ iss
	Potassii sulphurat. }	
	Aq. rosæ	℥ iii.

M. Sig. To be used as a lotion, at first twice daily, later once a day.